



Search Report

EIC 1700

STIC Database Tracking Number: 264606

To: MICHAEL BERNSHTEYN

Location: REM-10D25

Art Unit: 1796

Monday, July 14, 2008

Case Serial Number: 10/542019

From: MEI HUANG

Location: EIC1700

REM-4B31

Phone: (571)272-3952

mei.huang@uspto.gov

Search Notes

Examiner BERNSHTEYN:

Please feel free to contact me if you have any questions or if you would like to refine the search query. Thank you for using STIC services!

Regards,
Mei

JUN 26 RECD

Pat. & T.M. Office

Access DB# 264606

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: MICHAEL BERNSTEIN Examiner #: 81515 Date: 06/25/06
Art Unit: 1796 Phone Number 30 571-272-2411 Serial Number: 10/542,619
Mail Box and Bldg/Room Location: Room 10D25 Results Format Preferred: (circle) PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Crosslinked polyvinyl acetals

Inventors (please provide full names): Bernd Papentzhs, Martin Steuer,
Matthias Gutweller

Earliest Priority Filing Date: 01/09/2003

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please, try to find a polymer (A1) and (A2) according with all limitations of claims 1-12.

Thank you

M. Bernstein

Please, pay attention to the Priority Date!

Searcher: mh NA Sequence (#) _____ STN _____
Searcher Phone #: _____ AA Sequence (#) _____ Dialog _____
Searcher Location: _____ Structure (#) _____ Questel/Orbit _____
Date Searcher Picked Up: _____ Bibliographic _____ Dr. Link _____
Date Completed: 7/14/08 Litigation _____ Lexis/Nexis _____
Searcher Prep & Review Time: _____ Fulltext _____ Sequence Systems _____
Clerical Prep Time: _____ Patent Family _____ WWW/Internet _____
Online Time: _____ Other _____ Other (specify) _____

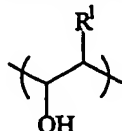
PTO-1590 (8-01)

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A method for the manufacture of cross-linked polyvinylacetals, in which a polymer (A1) which contains in relation to its total weight

- (a) 1.0 to 99.9 wt% structural units of formula (I)

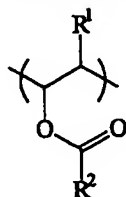


Ub

(1)

where R¹ represents hydrogen or methyl

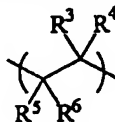
- (b) 0 to 99.0 wt% structural units of formula (2)



(2)

wherein R² represents hydrogen or an alkyl group with 1 to 6 carbon atoms,

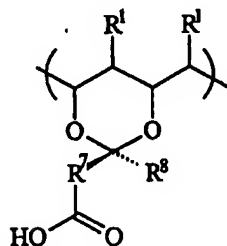
- (c) 0 to 70.0 wt% of structural units of formula (3)



(3)

wherein R³, R⁴, R⁵ and R⁶, are in each case groups independent of each other with a molecular weight in the range from 1 to 500 g/mol,

- (d) 0.00001 to 30.0 wt% structural units of formula (4a)



(4a)

L37-38

0

wherein R⁷ is a linkage, an alkylene group with 1 to 10 carbon atoms or an if necessary

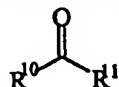
substituted arylene group with 6 to 12 carbon atoms and R^8 is hydrogen, COOH, an alkyl group with 1 to 10 carbon atoms or an if necessary substituted aryl group with 6 to 12 carbon atoms, wherein one in any sequence,

- (i) reacts polymer (A1) with at least one polyaldehyde of formula (5),
 $R^9(CHO)_n$ (5)
 wherein R^9 represents a linkage or a group having 1 to 40 carbon atoms and n is a whole number greater than 2

and

- (ii) groups of formula (1) and formula (4a) at least partially esterified with each other,

2. (Original) The method according to Claim 1, characterized in that at any point in time at least one compound of formula (6) is added,

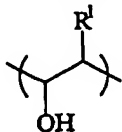


(6)

wherein R^{10} and R^{11} , are hydrogen, an alkyl group with 1 to 10 carbon atoms or an if necessary substituted aryl group with 6 to 12 carbon atoms, in each case independent of each other.

3. (Currently Amended) The method according to Claim 1 ~~and/or 2~~, characterized in that a polymer (A1) with R^8 = hydrogen is employed.
4. (Currently Amended) The method according to claim 1 ~~at least one of the preceding Claims~~, characterized in that a polymer (A1) is employed, in which R^7 is a linkage or an alkylene group with 1 to 4 carbon atoms.
5. (Original) A method for the manufacture of cross-linked polyvinylacetals, in which a polymer (A2) is cross-linked, which in relation to its total weight contains

- (a) 1.0 to 99.9 wt% structural units of formula (1)

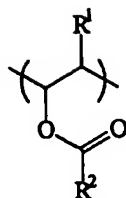


U₆

(1)

wherein R^1 represents hydrogen or methyl

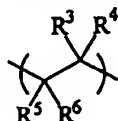
- (b) 0 to 99.0 wt% structural units of formula (2)



(2)

wherein R^2 represents hydrogen or an alkyl group with 1 to 6 carbon atoms,

- (c) 0 to 70.0 wt% of structural units of formula (3)

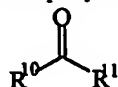


(3)

wherein R^3 , R^4 , R^5 and R^6 , are in each case groups independent of each other with a molecular weight in the range from 1 to 500 g/mol,

characterized in that

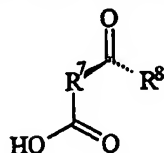
- (i) the polymer (A2) reacts with at least one compound of formula (6)



(6)

wherein R^{10} and R^{11} , in each case independent of each other, are hydrogen, an alkyl group with 1 to 10 carbon atoms or an if necessary substituted aryl group with 6 to 12 carbon atoms.

- (ii) at least one compound of formula (4b) is added



(4b)

154

wherein R^7 is a linkage, an alkylene group with 1 to 10 carbon atoms or an if necessary substituted arylene group with 6 to 12 carbon atoms and R^8 is hydrogen, COOH, an alkyl group with 1 to 10 carbon atoms or an if necessary substituted aryl group with 6 to 12 carbon atoms,

- (iii) a polyaldehyde added of formula (5),



(5)

127

wherein R^9 is a linkage or a group having 1 to 40 carbon atoms and n is a whole number greater than 2

and

- (iv) groups of formula (1) and derived from structural units of formula (4b) at least partially esterified with each other.

6. (Original) The method according to Claim 5, characterized in that at least one compound of formula (4b) with R^8 = hydrogen is employed.
7. (Currently Amended) The method according to Claim 5 ~~and/or 6~~, characterized in that at least one compound of formula (4b) is employed, in which R^7 is a linkage or an alkylene group with 1 to 4 carbon atoms.
8. (Currently Amended) The method according to claim 1 ~~at least one of the preceding Claims~~ characterized in that a compound (5) with $n = 2$ or 3 is employed.
9. (Currently Amended) The method according to claim 1 ~~at least one of the preceding Claims~~ characterized in that a compound (5) is employed in which R^9 is an aliphatic, cycloaliphatic and/or aromatic group with 1 to 12 carbon atoms.
10. (Original) The method according to Claim 9, characterized in that glutardialdehyde and/or n-nonanedial is utilized as compound (5).
11. (Currently Amended) The method according to claim 1 ~~one of the preceding Claims~~, characterized in that n-butyraldehyde is employed as compound (6).
12. (Currently Amended) The method according to claim 1 ~~one of the preceding Claims~~, characterized in that
 - (1) 95.00 to 99.99 parts by weight at least of one compound (6)
 - (2) 0.01 to 5.00 parts by weight at least of a polyaldehyde (5) is added, wherein the parts by weight given is made up to 100.00 parts by weight.
13. (Currently Amended) The method according to claim 1 ~~at least one of the preceding Claims~~, characterized in that, the esterification (ii) or (iv), is if necessary carried out in presence of at least one softener, at bulk temperatures in the range from 80 to 280 °C.
14. (Original) The method according to Claim 13, characterized in that the cross-linking is carried out in an extruder, kneading device or another heatable unit.
15. (Currently Amended) The cross-linked polyvinylacetal obtainable by means of a method in accordance with claim 1 ~~at least one of the preceding Claims~~.

16. (Original) The polyvinylacetal in accordance with Claim 15, characterized in that less than 10.0 wt% of its total content is esterified and non-esterified in relation to the total weight of polyvinylacetal.
17. (Currently Amended) The polyvinylacetal in accordance with Claim 15 ~~and/or 16~~, characterized in that it contains softeners.
18. (Currently Amended) Molding material containing a polyvinylacetal in accordance with claim 15 ~~at least one of Claims 15 through 17~~.
19. (Currently Amended) Film containing a polyvinylacetal in accordance with claim 15 ~~one of Claims 15 through 18~~.
20. (Original) The use of a film in accordance with Claim 19 for the manufacture of laminated safety glasses.
21. (Currently Amended) A coating containing a polyvinylacetal in accordance with claim 15 ~~at least one of Claims 15 through 17~~.
22. (Currently Amended) The use of a polyvinylacetal in accordance with claim 15 ~~at least one of Claims 15 through 17~~ for the manufacture of ionically conductive intermediate layers for electrochromic systems.



VOLUNTARY SEARCH FEEDBACK

Art Unit _____

App./Serial # _____

Relevant prior art found

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest
- ☐ Helped better understand invention
- ☐ Helped better understand state of the art in technology

Types ☐ Foreign Patent(s) ☐ Non-Patent Literature

Relevant prior art not found

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining the patentability or understanding of the invention.

COMMENTS

Questions about the scope or the results of the search?

Contact your EIC searcher or Team Leader.

Please submit completed form to your EIC

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12/07

Today's Date _____

Additional Notes if applicable (please indicate all actions including emails, phone calls, and individuals assisting):

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DICTIONARY FILE UPDATES: 13 JUL 2008 HIGHEST RN 1033821-28-1

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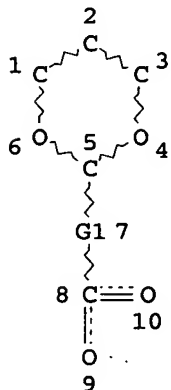
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on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

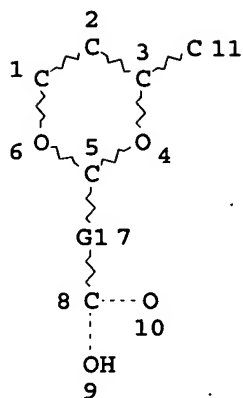
=> d que stat l34
L29 STR



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NODE ATTRIBUTES:
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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
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NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE
L31 1411 SEA FILE=REGISTRY SSS FUL L29
L32 STR



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 DEFAULT ECLEVEL IS LIMITED

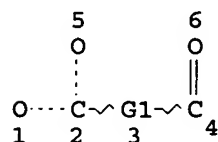
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STEREO ATTRIBUTES: NONE
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100.0% PROCESSED 49 ITERATIONS
 SEARCH TIME: 00.00.01

28 ANSWERS

=> d que stat 151
 L42 STR



REP G1=(1-10) A
 NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE
 L49 SCR 1840 OR 2040 OR 2016 OR 2026
 L51 151466 SEA FILE=REGISTRY SSS FUL L42 NOT L49

100.0% PROCESSED 571616 ITERATIONS
 SEARCH TIME: 00.00.03

151466 ANSWERS

=> d his nofile

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FILE 'HCAPLUS' ENTERED AT 12:35:49 ON 14 JUL 2008

L1 1 SEA ABB=ON PLU=ON US20060052532/PN
SEL RN

FILE 'REGISTRY' ENTERED AT 12:36:35 ON 14 JUL 2008

L2 2 SEA ABB=ON PLU=ON (26913-06-4/BI OR 623-27-8/BI)

L3 1 SEA ABB=ON PLU=ON 9002-89-5/RN

D SCA

E "(C3H6O)X"/MF

L4 29 SEA ABB=ON PLU=ON "(C3H6O)X"/MF

D SCA L3

D SCA

L5 1 SEA ABB=ON PLU=ON L4 AND 1-PROPEN-1-OL, HOMOPOLYMER/CN

L6 2 SEA ABB=ON PLU=ON L3 OR L5

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L7 STR

FILE 'REGISTRY' ENTERED AT 12:57:59 ON 14 JUL 2008

L8 0 SEA SSS SAM L7

FILE 'LREGISTRY' ENTERED AT 13:03:11 ON 14 JUL 2008

L9 STR L7

FILE 'REGISTRY' ENTERED AT 13:04:17 ON 14 JUL 2008

L10 0 SEA SSS SAM L9

L11 1 SEA ABB=ON PLU=ON ETHANEDIAL/CN

D SCA

E PROPANEDIAL/CN

L12 1 SEA ABB=ON PLU=ON PROPANEDIAL/CN

D SCA

L13 1 SEA ABB=ON PLU=ON 83513-30-8/RN

D SCA

L14 1 SEA ABB=ON PLU=ON 16002-19-0/RN

E BUTENEDIAL/CN

L15 1 SEA ABB=ON PLU=ON BUTENEDIAL/CN

D SCA

E BUTANEDIAL/CN

L16 1 SEA ABB=ON PLU=ON BUTANEDIAL/CN

D SCA

E PENTENEDIAL/CN

L17 1 SEA ABB=ON PLU=ON PENTENEDIAL/CN

D SCA

E HEXANEDIAL/CN

L18 1 SEA ABB=ON PLU=ON HEXANEDIAL/CN

D SCA

E HEPTANEDIAL/CN

L19 1 SEA ABB=ON PLU=ON HEPTANEDIAL/CN

D SCA

E OCTANEDIAL/CN

L20 1 SEA ABB=ON PLU=ON OCTANEDIAL/CN

D SCA

E OCTENEDIAL/CN

E DECANEDIAL/CN

L21 1 SEA ABB=ON PLU=ON DECANEDIAL/CN
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L23 1 SEA ABB=ON PLU=ON DODECANEDIAL/CN
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L24 1 SEA ABB=ON PLU=ON TRIDECANEDIAL/CN
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L26 1 SEA ABB=ON PLU=ON HEXADECANEDIAL/CN
E HEPTADECANEDIAL/CN

FILE 'LREGISTRY' ENTERED AT 13:41:40 ON 14 JUL 2008
L27 STR

FILE 'REGISTRY' ENTERED AT 13:45:04 ON 14 JUL 2008

L28 3 SEA SSS SAM L27
D SCA
L29 STR L27
L30 9 SEA SSS SAM L29
L31 1411 SEA SSS FUL L29
SAV L31 BER0194A/A

FILE 'LREGISTRY' ENTERED AT 13:49:40 ON 14 JUL 2008
L32 STR L29

FILE 'REGISTRY' ENTERED AT 13:50:13 ON 14 JUL 2008

L33 3 SEA SUB=L31 SSS SAM L32
L34 28 SEA SUB=L31 SSS FUL L32
SAV L34 BER0194AS1/A
D SCA
L35 0 SEA ABB=ON PLU=ON L34 AND RC=1
L36 10 SEA ABB=ON PLU=ON L34 AND NR=1
D SCA
L37 0 SEA ABB=ON PLU=ON L36 AND PMS/CI

FILE 'HCAPLUS' ENTERED AT 13:53:05 ON 14 JUL 2008

L38 74906 SEA ABB=ON PLU=ON L6
L39 QUE ABB=ON PLU=ON POLYVINYLA LCOHOL OR POLYVINYLA LCOH
OL OR POLY(W)VINYLA LCOHOL# OR PVA OR PVOH OR PVAL
L40 6 SEA ABB=ON PLU=ON L36
L41 0 SEA ABB=ON PLU=ON (L38 OR L39) AND L40

FILE 'LREGISTRY' ENTERED AT 14:02:23 ON 14 JUL 2008
L42 STR

FILE 'REGISTRY' ENTERED AT 14:04:20 ON 14 JUL 2008

L43 50 SEA SSS SAM L42
L44 SCR 2043

FILE 'REGISTRY' ENTERED AT 14:09:28 ON 14 JUL 2008

L45 SCR 1840
L46 50 SEA SSS SAM L42 NOT L45
L47 SCR 1840 OR 2040
L48 50 SEA SSS SAM L42 NOT L47
L49 SCR 1840 OR 2040 OR 2016 OR 2026
L50 50 SEA SSS SAM L42 NOT L49
L51 151466 SEA SSS FUL L42 NOT L49
SAV TEMP BER0194B/A L51

FILE 'HCAPLUS' ENTERED AT 14:14:39 ON 14 JUL 2008

L52 163595 SEA ABB=ON PLU=ON L51
DEL BER0194B/A
L53 1 SEA ABB=ON PLU=ON 2004:587942/AN

FILE 'REGISTRY' ENTERED AT 14:57:48 ON 14 JUL 2008

L54 2 SEA ABB=ON PLU=ON (111-30-8/BI OR 51651-40-2/BI)
L55 17 SEA ABB=ON PLU=ON (L11 OR L12 OR L13 OR L14 OR L15 OR
L16 OR L17 OR L18 OR L19 OR L20 OR L21 OR L22 OR L23 OR
L24 OR L25 OR L26) OR L54

FILE 'HCAPLUS' ENTERED AT 15:06:40 ON 14 JUL 2008

L56 32728 SEA ABB=ON PLU=ON L55
L57 1380 SEA ABB=ON PLU=ON (L38 OR L39) AND L56
L58 58 SEA ABB=ON PLU=ON L57 AND L52
L59 44 SEA ABB=ON PLU=ON L58 AND (PY<=2003 OR PRY<=2003 OR
AY<=2003)
L60 QUE ABB=ON PLU=ON ?ALDEHYDE?
L61 QUE ABB=ON PLU=ON ?KETONE?
L62 26 SEA ABB=ON PLU=ON L59 AND (L60 OR L61)
L63 QUE ABB=ON PLU=ON (CROSSLINK? OR CROSS(W)LINK? OR
CURING OR NETWORK?) (2A) (AGENT? OR ADDITIVE? OR COMPOUND?)
OR LINKER? OR CROSSLINKER?
L64 14 SEA ABB=ON PLU=ON (L59 OR L62) AND L63
L65 9 SEA ABB=ON PLU=ON L62 AND L64
L66 5568 SEA ABB=ON PLU=ON L55(L) RACT/RL
L67 1418 SEA ABB=ON PLU=ON L55(L) L63
L68 412 SEA ABB=ON PLU=ON L66 AND L67
L69 QUE ABB=ON PLU=ON POLYVINY(L)ACETAL? OR POLY(W)VINY(L)W
)ACETAL? OR POLYVINY(L)ACETAL?
L70 6 SEA ABB=ON PLU=ON L68 AND L69
L71 1 SEA ABB=ON PLU=ON L59 AND L69
D SCA
L72 9 SEA ABB=ON PLU=ON L65 NOT L71
L73 5 SEA ABB=ON PLU=ON L64 NOT (L71 OR L72)
L74 16 SEA ABB=ON PLU=ON L62 NOT (L71 OR L72 OR L73)
L75 13 SEA ABB=ON PLU=ON L59 NOT (L71 OR L72 OR L73 OR L74)
L76 20 SEA ABB=ON PLU=ON L34
L77 0 SEA ABB=ON PLU=ON (L38 OR L39) AND L76

=> fil hcap

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FILE LAST UPDATED: 13 Jul 2008 (20080713/ED)

HCAplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2008.

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d l71 ibib abs hitstr hitind

L71 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:836522 HCAPLUS

DOCUMENT NUMBER: 139:354456

TITLE: Compositions and methods for delivery of drugs and nucleic acids using pH sensitive molecules
INVENTOR(S): Monahan, Sean D.; Wolff, Jon A.; Hagstrom, James E.; Budker, Vladimir G.; Rozema, David B.

PATENT ASSIGNEE(S): Mirus Bio Corporation, USA

SOURCE: U.S. Pat. Appl. Publ., 47 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
US 20030199090	A1	20031023	US 2002-83456	20020226
			<--	
US 7208314	B2	20070424		
PRIORITY APPLN. INFO.:			US 2002-83456	20020226
				<--

AB A system relating to the delivery of desired compds. (e.g., drugs and nucleic acids) into cells using pH-sensitive delivery systems is presented. The system provides compns. and methods for the delivery and release of a compound to a cell. Transfection of Hela cells with histone H1 and the membrane active peptide melittin, dimethylmaleic-modified melittin or succinic anhydride-modified melittin was carried out. The 2,3-dimethylmaleic modification of melittin allowed the peptide to complex with the cationic protein

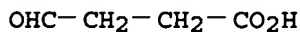
histone H1 and then cleave to release and reactivate in the lowered pH encountered by the complex in the cellular endosomal compartment. This caused a significant increase in luciferase expression over either unmodified melittin peptide or melittin peptide modified with succinic anhydride which allows complexing with histone H1 but does not cleave in lowered pH. Further, hemolytic activity of the transfection compds. was evaluated.

IT 111-30-8, Glutaric dialdehyde 692-29-5, Succinic semialdehyde 24991-23-9
 RL: BUU (Biological use, unclassified); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses) (comps. and methods for delivery of drugs and nucleic acids using pH sensitive mols.)
 RN 111-30-8 HCAPLUS
 CN Pentanedial (CA INDEX NAME)

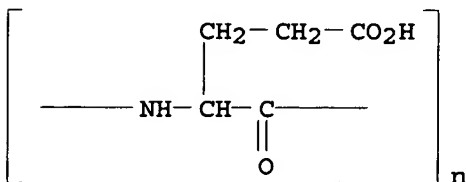


& Formula (5)

RN 692-29-5 HCAPLUS
 CN Butanoic acid, 4-oxo- (CA INDEX NAME)



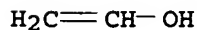
RN 24991-23-9 HCAPLUS
 CN Poly[imino[(1S)-1-(2-carboxyethyl)-2-oxo-1,2-ethanediyl]] (CA INDEX NAME)



IT 9002-89-5DP, Polyvinyl alcohol, reaction products with 3-aminopropyltrimethoxysilane 313048-86-1P
 RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (comps. and methods for delivery of drugs and nucleic acids using pH sensitive mols.)
 RN 9002-89-5 HCAPLUS
 CN Ethenol, homopolymer (CA INDEX NAME)

CM 1

CRN 557-75-5
 CMF C2 H4 O



RN 313048-86-1 HCAPLUS

& Formula
 (1)

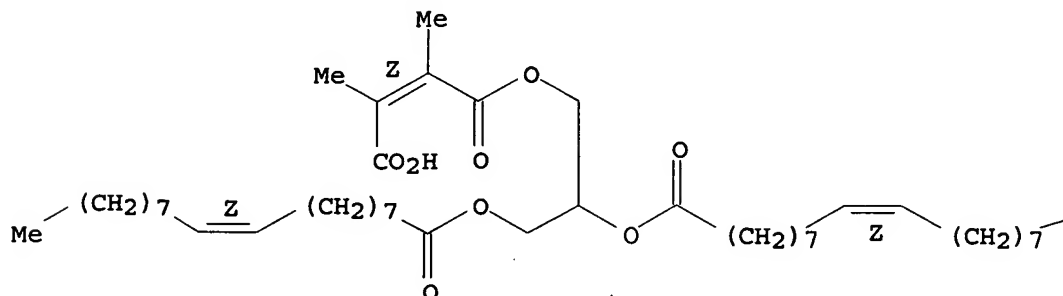
Mhuang EIC1700 REM4B31

07/14/2008

CN 2-Butenedioic acid, 2,3-dimethyl-, 1-[2,3-bis[[[(9Z)-1-oxo-9-octadecen-1-yl]oxy]propyl] ester, (2Z)- (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

—Me

IC ICM C12N015-63

ICS C12N015-85

INCL 435455000

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 1, 3

IT Polyvinyl acetals

RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(ketals; compns. and methods for delivery of drugs and nucleic acids using pH sensitive mols.)

IT 56-81-5, Glycerol, biological studies 107-15-3, Ethylene diamine, biological studies 108-30-5, Succinic anhydride, biological studies 111-30-8, Glutaric dialdehyde 112-77-6, Oleoyl chloride 112-90-3, Oleylamine 515-94-6, 2,3,-Diaminopropionic acid 563-96-2, Glyoxylic acid monohydrate 616-30-8, 3-Amino-1,2-propanediol 692-29-5, Succinic semialdehyde 1009-61-6, 1,4-Diacetylbenzene 2163-48-6, Diethylpropylmalonate 3699-66-9, Triethyl-2-phosphonopropionate 7209-38-3, 1,4-Bis(3-aminopropyl)piperazine 10389-65-8 13192-04-6, Dimethyl-2-oxoglutarate 13726-67-5, N-(tert-Butoxycarbonyl)-L-aspartic acid 24991-23-9 25513-46-6, Poly-L-glutamic acid 29022-11-5, FMOC-glycine 60129-38-6 289888-16-0 313048-80-5

RL: BUU (Biological use, unclassified); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses (compns. and methods for delivery of drugs and nucleic acids using pH sensitive mols.))

IT 487-66-1P 9002-89-5DP, Polyvinyl alcohol
, reaction products with 3-aminopropyltrimethoxysilane

9003-05-8DP, Acrylamide homopolymer, reaction products with pAcKL3
 13822-56-5DP, 3-Aminopropyltrimethoxysilane, reaction products
 poly-DL-serine 25104-18-1DP, Poly-L-Lysine, succinylated
 29056-54-0DP, Poly-DL-serine, reaction products with
 3-Aminopropyltrimethoxysilane 35141-36-7DP, N-
 Trimethoxysilylpropyl-N,N,N-trimethylammonium chloride, reaction
 products with polyserine 37231-28-0DP, Melittin, reaction products
 with 2,3-Dimethylmaleic anhydride 38000-06-5DP, Poly-L-lysine,
 sru, succinylated 58068-97-6DP, N-[3-(Triethoxysilyl)propyl]4,5-
 dihydroimidazole, reaction products with polyserine 138134-74-4P
 163222-85-3P 289888-17-1P, MC 151 289888-18-2P 313048-70-3P
 313048-78-1P, MC 303 313048-86-1P 313049-16-0P, MC 216
 313049-22-8P, MC 211 313049-25-1P, MC 225 313049-26-2P, MC 372
 313049-27-3P, MC 373 313049-28-4P 313049-29-5P 313049-34-2P
 313049-35-3P 313049-45-5P, MC 217 313050-03-2P 313050-61-2P
 313050-83-8P, MC 228 313050-85-0P, MC 208 313050-87-2P, MC 218
 313050-91-8P, MC 140 313050-96-3P, MC 229 313051-30-8P, MC 312
 313056-34-7P 313058-16-1P 313058-17-2P 313271-83-9DP, reaction
 products with polylysine 371246-56-9P 616894-30-5DP, reaction
 products with 2,3-dimethylmaleimide 618106-39-1P, MC 222
 618106-46-0P, MC 369 618107-18-9P, MC 221 618114-23-1P, MC 196
 618114-24-2P

RL: BUU (Biological use, unclassified); SPN (Synthetic preparation);
 BIOL (Biological study); PREP (Preparation); USES (Uses)
 (comps. and methods for delivery of drugs and nucleic acids
 using pH sensitive mols.)

REFERENCE COUNT: 57 THERE ARE 57 CITED REFERENCES AVAILABLE
 FOR THIS RECORD. ALL CITATIONS AVAILABLE
 IN THE RE FORMAT

=> d 172 ibib abs hitstr hitind 1-9

L72 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:903915 HCAPLUS

DOCUMENT NUMBER: 141:386449

TITLE: Heat-sensitive printing paper with good water
 and solvent resistances, writability, and
 printability

INVENTOR(S): Kano, Satoshi

PATENT ASSIGNEE(S): Mitsubishi Paper Mills, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2004299380	A	20041028	JP 2003-353144	200310 14
			<--	
WO 2005035259	A1	20050421	WO 2004-JP13194	200409 03
			<--	

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA,

CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
 GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR,
 KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX,
 MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,
 SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
 VN, YU, ZA, ZM, ZW
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW,
 AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ,
 DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL,
 PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
 GW, ML, MR, NE, SN, TD, TG
 DE 112004000801 T5 20060831 DE 2004-112004000801

200409
03

US 20070026259 A1 20070201 US 2006-555082

200605
12

PRIORITY APPLN. INFO.:

JP 2003-73995

A

200303
18

JP 2003-353144

A

200310
14

WO 2004-JP13194

W

200409
03

AB The heat-sensitive printing paper comprises (A) a support having thereon (B) a heat-sensitive color-forming layer which form colors upon heat and (C) a protection layer containing poly(vinyl alc.), chitosan, crosslinking agents, and colloidal SiO₂, preferably cationic colloidal SiO₂, as pigments. Preferably, the crosslinking agents comprise aldehydes, epichlorohydrin residue-containing compds., and/or isocyanates. Preferably, the poly(vinyl alc.) contain ≥ 1 poly(vinyl alcs.) (PVA) selected from unmodified PVA with saponification degree $\geq 95\%$, silanol-modified PVA, epoxy-modified PVA, diacetone-modified PVA, and acetoacetyl-modified PVA. Preferably, the protection layer further contain nonionic or cationic water-dispersing binders.

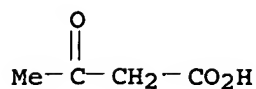
IT 39290-68-1
 RL: TEM (Technical or engineered material use); USES (Uses) (Z 200; heat-sensitive printing paper with water- and solvent-resistant protection layer containing)

RN 39290-68-1 HCAPLUS

CN Ethenol, homopolymer, 3-oxobutanoate (CA INDEX NAME)

CM . 1

CRN 541-50-4
 CMF C4 H6 O3

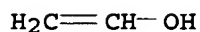


CM 2

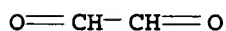
CRN 9002-89-5
 CMF (C2 H4 O)x
 CCI PMS

CM 3

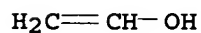
CRN 557-75-5
 CMF C2 H4 O



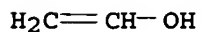
IT 107-22-2, Glyoxal 9002-89-5, PVA 117
 9002-89-5D, Poly(vinyl alcohol
), modified with silanol, epoxy, diacetone, or acetoacetyl
 RL: TEM (Technical or engineered material use); USES (Uses)
 (heat-sensitive printing paper with water- and solvent-resistant
 protection layer containing)
 RN 107-22-2 HCAPLUS
 CN Ethanediol (CA INDEX NAME)



RN 9002-89-5 HCAPLUS
 CN Ethenol, homopolymer (CA INDEX NAME)
 CM 1
 CRN 557-75-5
 CMF C2 H4 O



RN 9002-89-5 HCAPLUS
 CN Ethenol, homopolymer (CA INDEX NAME)
 CM 1
 CRN 557-75-5
 CMF C2 H4 O



IC ICM B41M005-26

CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38

ST heat sensitive printing paper PVA protection layer;
chitosan heat sensitive printing paper; colloidal silica pigment
heat sensitive printing paper; **crosslinking agent**
heat sensitive printing paper

IT 39290-68-1
RL: TEM (Technical or engineered material use); USES (Uses)
(Z 200; heat-sensitive printing paper with water- and solvent-resistant protection layer containing)

IT 822-06-0, Hexamethylene diisocyanate 34937-45-6,
Acrylamide-epichlorohydrin copolymer
RL: TEM (Technical or engineered material use); USES (Uses)
(**crosslinking agents**; heat-sensitive printing paper with water- and solvent-resistant protection layer containing)

IT 107-22-2, Glyoxal 9002-89-5, PVA 117
9002-89-5D, Poly(vinyl alcohol), modified with silanol, epoxy, diacetone, or acetoacetyl
9012-76-4, OTS 2 10043-35-3, Boric acid, uses 115471-08-4, Poval
R 1130 130960-31-5, PVA 217 188653-12-5, Snowtex AK-YL
262603-63-4, Denka Poval W 100 781626-26-4, D 1700 781626-44-6,
Vinyblan 2685 854021-65-1, Snowtex AK
RL: TEM (Technical or engineered material use); USES (Uses)
(heat-sensitive printing paper with water- and solvent-resistant protection layer containing)

L72 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:855982 HCAPLUS

DOCUMENT NUMBER: 139:338810

TITLE: Hydrogels having enhanced elasticity and mechanical strength properties

INVENTOR(S): Omidian, Hossein; Qiu, Yong; Yang, Shicheng;
Kim, Dukjoon; Park, Haesun; Park, Kinam

PATENT ASSIGNEE(S): Purdue Research Foundation, USA

SOURCE: PCT Int. Appl., 91 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003089506	A1	20031030	WO 2003-US12340	20030422

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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2003234159 A1 20031103 AU 2003-234159 200304
22
US 20030232895 A1 20031218 US 2003-420323 200304
22
US 6960617 B2 20051101 200304
22
PRIORITY APPLN. INFO.: US 2002-374388P P 200204
22
WO 2003-US12340 W 200304
22

AB Hydrogels having improved elasticity and mech. strength properties are obtained by subjecting a hydrogel formulation containing a strengthening agent to chemical or phys. crosslinking conditions subsequent to initial gel formation. Superporous hydrogels having improved elasticity and mech. strength properties are similarly obtained whenever the hydrogel formulation is provided with a foaming agent. Interpenetrating networks of polymer chains comprised of primary polymer(s) and strengthening polymer(s) are thereby formed. The primary polymer affords capillary-based water sorption properties while the strengthening polymer imparts significantly enhanced mech. strength and elasticity to the hydrogel or superporous hydrogel. Suitable strengthening agents can be natural or synthetic polymers, polyelectrolytes, or neutral, hydrophilic polymers. Thus, 50% acrylamide solution 500, 1.0% N,N-methylenebisacrylamide solution 100, 10.0% Pluronic F 127 solution 50, glacial acetic acid 50, and 2% aqueous sodium alginate solution 1500 μ l were mixed, 50 μ l 20% ammonium persulfate solution and 50 μ l 20% N,N,N',N'-tetramethylenediamine solution was added therein, 30 mg sodium bicarbonate was added therein and reacted, poured into an 30% aqueous calcium chloride solution, washed, and dried to give a porous hydrogel with good stretching, compression, and bending stress resistance.

IT 111-30-8, Glutaraldehyde
RL: MOA (Modifier or additive use); USES (Uses)
(crosslinker; preparation of hydrogels having enhanced elasticity and mech. strength properties)
RN 111-30-8 HCAPLUS
CN Pentanedial (CA INDEX NAME)

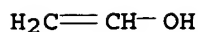
OHC-(CH₂)₃-CHO

IT 9002-89-5, Polyvinyl alcohol
24991-23-9 26063-13-8, Poly(aspartic acid)
31851-29-3
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(interpenetrating networks; preparation of hydrogels having enhanced elasticity and mech. strength properties)
RN 9002-89-5 HCAPLUS
CN Ethenol, homopolymer (CA INDEX NAME)

CM 1

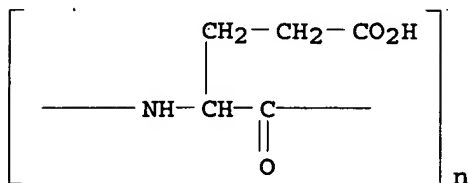
CRN 557-75-5

CMF C2 H4 O



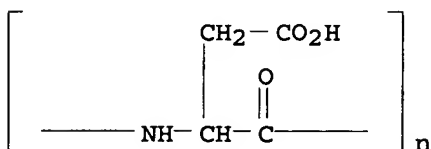
RN 24991-23-9 HCAPLUS

CN Poly[imino[(1S)-1-(2-carboxyethyl)-2-oxo-1,2-ethanediyl]] (CA INDEX NAME)



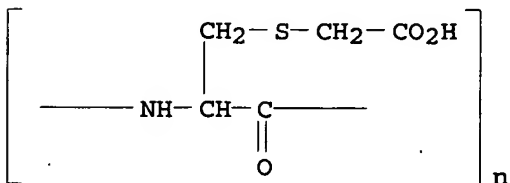
RN 26063-13-8 HCAPLUS

CN Poly[imino[(1S)-1-(carboxymethyl)-2-oxo-1,2-ethanediyl]] (CA INDEX NAME)



RN 31851-29-3 HCAPLUS

CN Poly[imino[(1R)-1-[[(carboxymethyl)thio]methyl]-2-oxo-1,2-ethanediyl]] (9CI) (CA INDEX NAME)



IC ICM C08J009-40

ICS C08G063-48; C08F116-06; C08F016-06; C08F216-06

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 33, 63

IT 56-81-5, Glycerol, uses 111-30-8, Glutaraldehyde

RL: MOA (Modifier or additive use); USES (Uses)

(crosslinker; preparation of hydrogels having enhanced elasticity and mech. strength properties)

IT 154-23-4, Catechin 327-97-9, Chlorogenic acid 490-46-0,

Epicatechin 497-76-7, Arbutin 1398-61-4, Chitin 9000-69-5,

Pectin 9002-89-5, Polyvinyl alcohol
 9002-98-6 9003-01-4, Polyacrylic acid 9003-05-8, Polyacrylamide
 9003-39-8, Polyvinyl pyrrolidone 9004-32-4, Carboxymethyl
 cellulose 9004-34-6, Cellulose, uses 9004-54-0, Dextran, uses
 9004-61-9, Hyaluronic acid 9005-25-8, Starch, uses 9005-32-7,
 Alginic acid 9005-38-3, Algin 9005-53-2, Lignin, uses
 9012-76-4, Chitosan 9042-14-2, Dextran sulfate 9063-38-1, Sodium
 starch glycolate 11138-66-2, Xanthan 12619-70-4, Cyclodextrin
 24937-47-1, Poly(L-arginine) 24991-23-9 25068-14-8,
 Polyacrolein 25213-33-6, Polyproline 25322-64-9 25322-68-3,
 Polyethylene glycol 25987-30-8, Acrylic acid-acrylamide copolymer
 sodium salt 26062-79-3, Diallyldimethylammonium chloride
 homopolymer 26063-13-8, Poly(aspartic acid) 26521-10-8,
 Polysarcosine 31851-29-3 38000-06-5, Poly(L-lysine)
 50851-57-5 59680-46-5, Kymene 557H 63183-41-5, Sodium glycine
 carbonate 142804-65-7, Gellan 187606-35-5, 2-Hydroxyethyl
 acrylate-polyethylene glycol diacrylate copolymer
 RL: PEP (Physical, engineering or chemical process); POF (Polymer in
 formulation); PYP (Physical process); TEM (Technical or engineered
 material use); PROC (Process); USES (Uses)
 (interpenetrating networks; preparation of hydrogels having enhanced
 elasticity and mech. strength properties)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN
 THE RE FORMAT

L72 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:470700 HCAPLUS

DOCUMENT NUMBER: 139:37686

TITLE: Two-component adhesive compositions with good
 initial bond strength for wood

INVENTOR(S): Kitamura, Kiyoharu; Shibuya, Mitsuo

PATENT ASSIGNEE(S): Nippon Synthetic Chemical Industry Co., Ltd.,
 Japan; Mitsubishi Chemical Corp.

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003171637	A	20030620	JP 2001-370800	20011205
JP 4112853	B2	20080702	JP 2001-370800	20011205

AB Two-component adhesive compns. comprise (A) aqueous liqs. containing
 modified vinyl alc. polymers having functional groups reactive
 toward acetoacetate ester groups and Huggins constant ≥ 0.5 and
 (B) aqueous liqs. containing vinyl alc. polymers having acetoacetate ester
 groups. Thus, vinyl acetate was copolymd. with N-vinylformamide in
 MeOH in the presence of AIBN and the resulting copolymer was saponified
 and hydrolyzed to give vinyl alc.-N-vinylamine copolymer (I; amino

group content 7.6 mol%, residual amide content 0.4 mol%, saponification degree 99.8 mol%, Huggins constant 0.55). An aqueous liquid containing 100 parts aqueous solution containing 10% I and 50 parts CaCO₃ was applied on an adherent surface of a wood piece at 200 g/m². An aqueous solution containing poly(vinyl alc.) acetoacetate

(acetoacetate ester content 2 mol%) was applied on an adherent surface of another wood piece at 200 g/m². The bond strength measured 5 min after 2-min pressing of the 2 wood pieces against each other at 10 kg/cm² was 61 kg/cm².

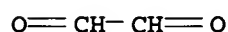
IT 107-22-2, Glyoxal

RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)

(crosslinking agent; two-component adhesives containing modified vinyl alc. polymers with good initial bond strength for wood)

RN 107-22-2 HCAPLUS

CN Ethanedial (CA INDEX NAME)



IT 39290-68-1, Poly(vinyl alcohol)
) acetoacetate

RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)

(two-component adhesives containing modified vinyl alc. polymers with good initial bond strength for wood)

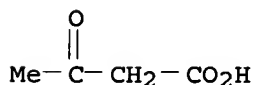
RN 39290-68-1 HCAPLUS

CN Ethenol, homopolymer, 3-oxobutanoate (CA INDEX NAME)

CM 1

CRN 541-50-4

CMF C4 H6 O3



CM 2

CRN 9002-89-5

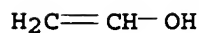
CMF (C2 H4 O)x

CCI PMS

CM 3

CRN 557-75-5

CMF C2 H4 O



IC ICM C09J129-04

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 37, 43

ST vinyl alc polymer adhesive bond strength; wood adhesive modified vinyl alc polymer; amine acetoacetate **polyvinyl alc** adhesive strength; two component adhesive modified **polyvinyl alc**

IT **Aldehydes, uses**
 RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
 (crosslinking agents; two-component adhesives containing modified vinyl alc. polymers with good initial bond strength for wood)

IT **Crosslinking agents**
 Wood
 (two-component adhesives containing modified vinyl alc. polymers with good initial bond strength for wood)

IT 107-22-2, Glyoxal 9002-98-6, Polyethylenimine
 RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
 (crosslinking agent; two-component adhesives containing modified vinyl alc. polymers with good initial bond strength for wood)

IT 39290-68-1, Poly(vinyl alcohol)
) acetoacetate
 RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
 (two-component adhesives containing modified vinyl alc. polymers with good initial bond strength for wood)

L72 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:910371 HCAPLUS

DOCUMENT NUMBER: 136:54821

TITLE: Two-component adhesive compositions with high initial cure rate and good processability and their bonding method

INVENTOR(S): Tanimoto, Seiji; Inomata, Naokiyo

PATENT ASSIGNEE(S): Kuraray Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2001348550	A	20011218	JP 2000-169121	20000606

PRIORITY APPLN. INFO.:

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 JP 2000-169121

20000606

AB The composition comprises first component containing (A) a vinyl alc. polymer having an active hydrogen-containing functional group and (B) imido-containing isobutylene-maleimide polymer, and second component containing a water-soluble aldehyde compound. Thus, first component containing amino-modified **polyvinyl alc.** aqueous solution 200, Isobam 304 (isobutylene-maleimide polymer) 100 and P 30

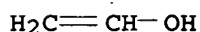
(calcium carbonate) 100 parts and second component containing 15% glyoxal aqueous solution were coated resp. on two beech wood plates, press bonded and cured, showing high adhesion strength.

IT 9002-89-5D, Polyvinyl alcohol,
amino-modified 39290-68-1, Gohsefimer Z 200
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(adhesive compns. containing; two-component adhesive compns. with high initial cure rate and good processability and their bonding method)

RN 9002-89-5 HCAPLUS
CN Ethenol, homopolymer (CA INDEX NAME)

CM 1

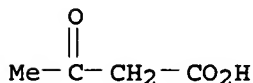
CRN 557-75-5
CMF C2 H4 O



RN 39290-68-1 HCAPLUS
CN Ethenol, homopolymer, 3-oxobutanoate (CA INDEX NAME)

CM 1

CRN 541-50-4
CMF C4 H6 O3

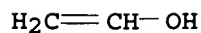


CM 2

CRN 9002-89-5
CMF (C2 H4 O)x
CCI PMS

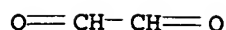
CM 3

CRN 557-75-5
CMF C2 H4 O

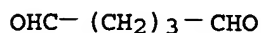


IT 107-22-2, Glyoxal 111-30-8, Glutaraldehyde
RL: MOA (Modifier or additive use); USES (Uses)
(crosslinking agent; two-component adhesive compns. with high initial cure rate and good processability and their bonding method)

RN 107-22-2 HCAPLUS
CN Ethanediol (CA INDEX NAME)



RN 111-30-8 HCAPLUS
CN Pentanedial (CA INDEX NAME)



IC ICM C09J129-04
ICS C09J005-04; C09J123-22; C09J135-00; C09J163-00
CC 38-3 (Plastics Fabrication and Uses)
ST polyvinyl alc two component adhesive;
isobutylene maleimide polymer two component adhesive;
aldehyde two component adhesive initial curability
IT Dialdehydes
RL: MOA (Modifier or additive use); USES (Uses)
(crosslinking agent; two-component adhesive
comps. with high initial cure rate and good processability and
their bonding method)
IT 9002-89-5D, Polyvinyl alcohol,
amino-modified 39290-68-1, Gohsefimer Z 200 68565-41-3
98226-17-6, Isobam 304
RL: POF (Polymer in formulation); TEM (Technical or engineered
material use); USES (Uses)
(adhesive comps. containing; two-component adhesive comps. with
high initial cure rate and good processability and their bonding
method)
IT 107-22-2, Glyoxal 111-30-8, Glutaraldehyde
RL: MOA (Modifier or additive use); USES (Uses)
(crosslinking agent; two-component adhesive
comps. with high initial cure rate and good processability and
their bonding method)

L72 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:464810 HCAPLUS
DOCUMENT NUMBER: 133:96819
TITLE: Method for ink-jet printing using ink-hardening
agent for aqueous ink
INVENTOR(S): Kovacs, Csaba A.; Kung, Teh-Min; Romano, Charles
Eugene, Jr.
PATENT ASSIGNEE(S): Eastman Kodak Co., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	-----	-----	
JP 2000190618	A	20000711	JP 1999-354268	199912 14
			<--	
EP 1024021	A2	20000802	EP 1999-204146	199912

06

<--

EP 1024021 A3 20000906

EP 1024021 B1 20030723

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,
PT, IE, SI, LT, LV, FI, RO

PRIORITY APPLN. INFO.:

US 1998-216288

A

199812

18

<--

AB The method for ink-jet printing includes a recording material having a recording layer, which contains a polymer-dispersing agent and gelatin or an cross-link-able acetoacetylated polyvinyl alc., on a support, an aqueous deprotonated cationic dye ink, which is protonated to form a conjugated cationic dye with N-H group, and an aqueous organic ink-hardening agent for crosslinking the polymer in the ink. The method provides an image of the improved light-, moisture, and scratch-resistance.

IT 39290-68-1, Gohsefimer Z 200

RL: TEM (Technical or engineered material use); USES (Uses)
(Gohsefimer Z 200; ink-jet ink)

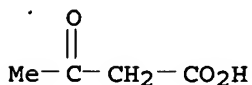
RN 39290-68-1 HCAPLUS

CN Ethenol, homopolymer, 3-oxobutanoate (CA INDEX NAME)

CM 1

CRN 541-50-4

CMF C4 H6 O3



CM 2

CRN 9002-89-5

CMF (C2 H4 O)x

CCI PMS

CM 3

CRN 557-75-5

CMF C2 H4 O



IT 111-30-8, Glutaraldehyde

RL: TEM (Technical or engineered material use); USES (Uses)
(ink-hardening agent)

RN 111-30-8 HCAPLUS

CN Pentanedial (CA INDEX NAME)



IC ICM B41M005-00
ICS B41M005-00; B41J002-01; C09D011-00
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 42
ST ink jet printing crosslinking agent
IT 39290-68-1, Gohsefimer Z 200
RL: TEM (Technical or engineered material use); USES (Uses)
(Gohsefimer Z 200; ink-jet ink)
IT 50-00-0, Formaldehyde, uses 111-30-8,
Glutaraldehyde 3278-22-6, Bis(vinylsulfonylmethane)
4845-50-5, 2,3-Dihydroxy-1,4-dioxane
RL: TEM (Technical or engineered material use); USES (Uses)
(ink-hardening agent)

L72 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:752938 HCAPLUS

DOCUMENT NUMBER: 132:4153

TITLE: Hardener addition to pigmented ink jet inks for water-fast images in printing on poly(vinyl alcohol) receivers

INVENTOR(S): Erdtmann, David; Romano, Charles E.; Martin, Thomas W.; Maskasky, Joe Edward

PATENT ASSIGNEE(S): Eastman Kodak Co., USA

SOURCE: Eur. Pat. Appl., 14 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

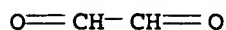
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 959113	A1	19991124	EP 1999-201479	19990512
<--				
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 6020398	A	20000201	US 1998-83869	19980522
<--				
JP 2000001641	A	20000107	JP 1999-141721	19990521
<--				
PRIORITY APPLN. INFO.:			US 1998-83869	A 19980522

AB The title hardeners, such as aldehydes and olefins are added to pigmented inks. An ink contained pigment black 7, water, biocide, and 0.5% bis(vinylsulfonylmethyl)ether.

IT 107-22-2, Glyoxal

RL: MOA (Modifier or additive use); USES (Uses)
(hardener; hardener addition to pigmented ink jet inks for water-fast images in printing on poly(vinylalc.) receivers)

RN 107-22-2 HCAPLUS
CN Ethanedial (CA INDEX NAME)



IT 9002-89-5D, Poly(vinylalcohol), acetoacetylated
39290-68-1, Gohsefimer Z-200
RL: PEP (Physical, engineering or chemical process); PRP
(Properties); PROC (Process)
(receiver sheet; hardener addition to pigmented ink jet inks for
water-fast images in printing on poly(vinylalc.) receivers)

RN 9002-89-5 HCAPLUS
CN Ethenol, homopolymer (CA INDEX NAME)

CM 1

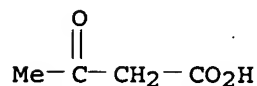
CRN 557-75-5
CMF C2 H4 O



RN 39290-68-1 HCAPLUS
CN Ethenol, homopolymer, 3-oxobutanoate (CA INDEX NAME)

CM 1

CRN 541-50-4
CMF C4 H6 O3

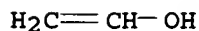


CM 2

CRN 9002-89-5
CMF (C2 H4 O)x
CCI PMS

CM 3

CRN 557-75-5
CMF C2 H4 O



IC ICM C09D011-00
ICS B41M005-00
CC 42-12 (Coatings, Inks, and Related Products)
Section cross-reference(s): 38
ST pigmented ink printing hardener; aldehyde hardener

printing ink; olefin hardener printing ink

IT **Crosslinking agents**
 (aldehyde or olefin blocked or unblocked; hardener
 addition to pigmented ink jet inks for water-fast images in printing
 on poly(vinylalc.) receivers)

IT 50-00-0, Formaldehyde, uses 107-22-2, Glyoxal
 3278-22-6, Bis(vinylsulfonyl)methane 4845-50-5,
 2,3-Dihydroxy-1,4-dioxane 26750-50-5,
 Bis(vinylsulfonylmethyl)ether 143749-46-6, Sunrez 700M
 251092-26-9, Sequarez 755
 RL: MOA (Modifier or additive use); USES (Uses)
 (hardener; hardener addition to pigmented ink jet inks for
 water-fast images in printing on poly(vinylalc.) receivers)

IT 9002-89-5D, Poly(vinylalcohol), acetoacetylated
 39290-68-1, Gohsefimer Z-200
 RL: PEP (Physical, engineering or chemical process); PRP
 (Properties); PROC (Process)
 (receiver sheet; hardener addition to pigmented ink jet inks for
 water-fast images in printing on poly(vinylalc.) receivers)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN
 THE RE FORMAT

L72 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1991:681582 HCAPLUS

DOCUMENT NUMBER: 115:281582

ORIGINAL REFERENCE NO.: 115:47845a,47848a

TITLE: Adhesive compositions for labels

INVENTOR(S): Shiragami, Sadahiko; Miyazaki, Hirotooshi;
 Maruyama, Hitoshi

PATENT ASSIGNEE(S): Kuraray Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
 CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 03131648	A	19910605	JP 1989-269946	198910 16

PRIORITY APPLN. INFO.: JP 1989-269946

198910
16

AB Comps. useful for adhesion of labels with glass bottles contain
 acetoacetylated poly(vinyl alc.) (I),
 crosslinking agents, alkaline-soluble compds., and/or
 alkaline-swelling compds. Thus, a composition containing 2.5%
 acetoacetylated I
 (d.p. 1700) 100, isobutylene-maleic anhydride copolymer (Isobam 10)
 powders 20, and glyoxal 3 parts had solid content 22.6%, viscosity
 20,500 cP at 20°, and good adhesion when used for adhering
 labels with glass bottles.

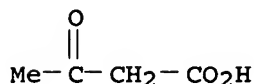
IT 39290-68-1
 RL: USES (Uses)

(adhesive compns. containing, for adhesion of labels with glass bottles)

RN 39290-68-1 HCAPLUS
CN Ethenol, homopolymer, 3-oxobutanoate (CA INDEX NAME)

CM 1

CRN 541-50-4
CMF C4 H6 O3

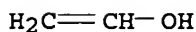


CM 2

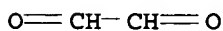
CRN 9002-89-5
CMF (C2 H4 O)x
CCI PMS

CM 3

CRN 557-75-5
CMF C2 H4 O



IT 107-22-2, Glyoxal
RL: MOA (Modifier or additive use); USES (Uses)
(crosslinking agent, adhesive compns. containing,
for adhesion of labels with glass bottles)
RN 107-22-2 HCAPLUS
CN Ethanedial (CA INDEX NAME)



IC ICM C08L029-02
ICS C03C027-00; C08G018-62; C08L023-02; C08L029-02; C08L031-04;
C08L035-00; C08L061-34; C09J123-02; C09J129-02; C09J131-04;
C09J135-00; C09J161-34; C09J175-04
CC 38-3 (Plastics Fabrication and Uses)
ST glass bottle label adhesive; acetoacetylated polyvinyl
alc adhesive; isobutylene maleic anhydride copolymer
adhesive
IT Adhesives
(acetoacetylated poly(vinyl alc.),
for labels)
IT Labels
(adhesives for, acetoacetylated poly(vinyl
alc.)-based, for glass bottles)
IT 1344-28-1, Alumina, uses and miscellaneous 9004-32-4,
Carboxymethyl cellulose 10043-01-3, Aluminum sulfate 25609-89-6
39290-68-1 96510-78-0, KI Gel 201 106209-33-0, SMA 1000

110171-93-2, Isobam 10

RL: USES (Uses)

(adhesive compns. containing, for adhesion of labels with glass bottles)

IT 107-22-2, Glyoxal 9011-05-6, Formaldehyde-urea copolymer 9016-87-9, Millionate MR

RL: MOA (Modifier or additive use); USES (Uses)

(crosslinking agent, adhesive compns. containing, for adhesion of labels with glass bottles)

L72 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1987:20929 HCAPLUS

DOCUMENT NUMBER: 106:20929

ORIGINAL REFERENCE NO.: 106:3553a,3556a

TITLE: Aqueous gel compositions as metalworking lubricants

INVENTOR(S): Shimokawa, Wataru; Fukumori, Katuaki

PATENT ASSIGNEE(S): Hoechst Gosei Co., Ltd., Japan

SOURCE: Ger. Offen., 49 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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DE 3609928	A1	19861009	DE 1986-3609928	198603 24
			<--	
DE 3609928	C2	19901018		
JP 61220656	A	19860930	JP 1985-62690	198503 27
			<--	
JP 63063230	B	19881206		
JP 62011456	A	19870120	JP 1985-149015	198507 06
			<--	
JP 63063231	B	19881206		
JP 62112604	A	19870523	JP 1985-252488	198511 11
			<--	
JP 05008921	B	19930203		
GB 2172891	A	19861001	GB 1986-7285	198603 24
			<--	
GB 2172891	B	19891018		
US 4708821	A	19871124	US 1986-843430	198603 24
			<--	
FR 2579604	A1	19861003	FR 1986-4268	198603 25

FR 2579604
PRIORITY APPLN. INFO.:

B1 19920221

<--

JP 1985-62690

A

198503
27

<--

JP 1985-149015

A

198507
06

<--

JP 1985-252488

A

198511
11

<--

AB Aqueous gel compns., suitable for use as lubricants, especially in metalworking, are prepared in water by crosslinking a water-soluble acetoacetylated high mol.-weight compound with a crosslinking agent. The gel compns., which can contain a perfume or deodorant, are suitably prepared from acetoacetylated poly(vinyl alc.), hydroxyethyl cellulose, hydroxypropyl cellulose, Me cellulose, CM-cellulose, and starch; suitable crosslinking agents include compds. containing amino, aldehyde, hydrazino, epoxy, and methylol groups, as well as a metal chelate or alkoxide. A 10% aqueous solution of acetoacetylated poly(vinyl alc.) (degree of acetoacetylation 5.5 mol%, degree of hydrolysis 99%, d.p. 1100) was mixed with 10 weight parts of a 10% aqueous solution of N-β-(aminoethyl)-γ-aminopropyltrimethoxysilane and stirred at room temperature, until gelation was complete within 4 min. The gel was transparent and was stable at room temperature for a week, at -20° for 24 h, and at 70° for 24 h.

IT 39290-68-1D, acetoacetylated 78207-15-5
104708-71-6D, acetoacetylated 105953-68-2
105953-69-3 105953-70-6

RL: USES (Uses)

(crosslinked, aqueous gels containing, as metalworking lubricants)

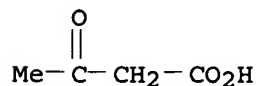
RN 39290-68-1 HCAPLUS

CN Ethenol, homopolymer, 3-oxobutanoate (CA INDEX NAME)

CM 1

CRN 541-50-4

CMF C4 H6 O3



CM 2

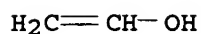
CRN 9002-89-5

CMF (C2 H4 O)x

CCI PMS

CM 3

CRN 557-75-5
CMF C2 H4 O



RN 78207-15-5 HCAPLUS
CN Starch, 3-oxobutanoate (9CI) (CA INDEX NAME)

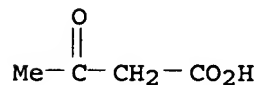
CM 1

CRN 9005-25-8
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 541-50-4
CMF C4 H6 O3



RN 104708-71-6 HCAPLUS
CN Cellulose, 3-oxobutanoate, 2-hydroxyethyl ether (9CI) (CA INDEX NAME)

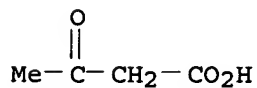
CM 1

CRN 9004-34-6
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

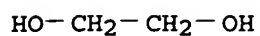
CM 2

CRN 541-50-4
CMF C4 H6 O3



CM 3

CRN 107-21-1
CMF C2 H6 O2



RN 105953-68-2 HCAPLUS
CN Cellulose, 3-oxobutanoate, carboxymethyl ether (9CI) (CA INDEX
NAME)

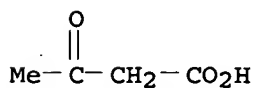
CM 1

CRN 9004-34-6
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

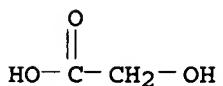
CM 2

CRN 541-50-4
CMF C4 H6 O3



CM 3

CRN 79-14-1
CMF C2 H4 O3



RN 105953-69-3 HCAPLUS
CN Cellulose, 3-oxobutanoate, 2-hydroxypropyl ether (9CI) (CA INDEX
NAME)

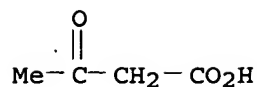
CM 1

CRN 9004-34-6
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

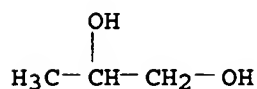
CM 2

CRN 541-50-4
CMF C4 H6 O3



CM 3

CRN 57-55-6
CMF C3 H8 O2



RN 105953-70-6 HCAPLUS
CN Cellulose, 3-oxobutanoate, methyl ether (9CI) (CA INDEX NAME)

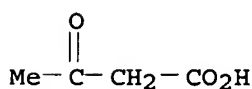
CM 1

CRN 9004-34-6
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

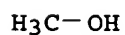
CM 2

CRN 541-50-4
CMF C4 H6 O3

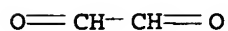


CM 3

CRN 67-56-1
CMF C H4 O



IT 107-22-2
RL: MOA (Modifier or additive use); USES (Uses)
(crosslinking agent, for preparation of aqueous gel lubricants)
RN 107-22-2 HCAPLUS
CN Ethanediol (CA INDEX NAME)



IC ICM C08J003-06
ICS C08J003-24; C08L031-02; C08L001-32; C08K005-24; C08K005-17;
C08K005-15; C08K005-07; C08K005-05; C10M173-02; A61K007-46;
A61L009-01

ICI C08J003-24, C08K005-24; C08K005-17, C08K005-15, C08K005-07,
C08K005-05; C10M173-02, C10M107-24

CC 51-8 (Fossil Fuels, Derivatives, and Related Products)
Section cross-reference(s): 56

ST gel lubricant metalworking; crosslinked acetoacetyated polymer
metalworking lubricant; polyvinyl alc
crosslinked lubricant gel

IT **Crosslinking agents**
(for acetoacetylated compds., in preparation of aqueous gel metalworking
lubricants)

IT 9002-98-6D, acetoacetylated 39290-68-1D, acetoacetylated
78207-15-5 104708-71-6D, acetoacetylated
105953-68-2 105953-69-3 105953-70-6
RL: USES (Uses)
(crosslinked, aqueous gels containing, as metalworking lubricants)

IT 107-22-2 108-78-1D, polymers 497-18-7 1071-93-8,
Adipic acid dihydrazide 1760-24-3 14814-02-9, Titanium lactate
26142-30-3 26403-72-5 80778-56-9
RL: MOA (Modifier or additive use); USES (Uses)
(**crosslinking agent**, for preparation of aqueous gel
lubricants)

IT 7429-90-5D, alkoxide salts 7440-32-6D, alkoxide salts
7440-67-7D, alkoxide salts
RL: MOA (Modifier or additive use); USES (Uses)
(**crosslinking agents**, for preparation of aqueous gel
metalworking lubricants)

L72 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN

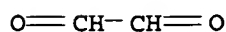
ACCESSION NUMBER: 1982:36282 HCAPLUS
DOCUMENT NUMBER: 96:36282
ORIGINAL REFERENCE NO.: 96:6017a,6020a
TITLE: Resin solutions
PATENT ASSIGNEE(S): Nippon Synthetic Chemical Industry Co., Ltd.,
Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 56125446	A	19811001	JP 1980-28618	198003 06
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JP 63020264	B	19880427		
PRIORITY APPLN. INFO.:			JP 1980-28618	A 198003 06
			<--	

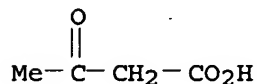
AB Solns. for casting waterproof films contain poly(
vinyl alc.) acetoacetate (I). [42615-46-3

], crosslinking agents, and β -diketones. Thus, I (6 mol% acetoacetate) 200, water 160, 25% glyoxal [107-22-2] 25, and acetylacetone [123-54-6] 180 parts was cast to a 100- μ film and dried 1 h at 105°. The film did not dissolve in 1 h in water at 80°.

IT 107-22-2
 RL: MOA (Modifier or additive use); USES (Uses)
 (crosslinking agents, for poly(vinyl
 acetoacetate) films)
 RN 107-22-2 HCAPLUS
 CN Ethanediol (CA INDEX NAME)

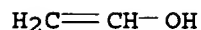


IT 39290-68-1
 RL: USES (Uses)
 (waterproof films from crosslinked)
 RN 39290-68-1 HCAPLUS
 CN Ethenol, homopolymer, 3-oxobutanoate (CA INDEX NAME)
 CM 1
 CRN 541-50-4
 CMF C4 H6 O3



CM 2
 CRN 9002-89-5
 CMF (C2 H4 O)x
 CCI PMS

CM 3
 CRN 557-75-5
 CMF C2 H4 O



IC C08L029-04; C08F008-00; C08K005-07
 ICA C09D003-74; C09J003-14
 CC 37-6 (Plastics Manufacture and Processing)
 ST vinyl acetoacetate polymer film; film polymer waterproof;
 crosslinking plastic film; glyoxal crosslinker film;
 acetylacetone film waterproof
 IT Crosslinking agents
 (glyoxal, for poly(vinyl acetoacetate) films)
 IT 107-22-2
 RL: MOA (Modifier or additive use); USES (Uses)
 (crosslinking agents, for poly(vinyl

acetoacetate) films)
 IT 39290-68-1
 RL: USES (Uses)
 (waterproof films from crosslinked)

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L73 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2004:780109 HCAPLUS
 DOCUMENT NUMBER: 141:282800
 TITLE: Solid dosage forms containing biodegradable
 polymer and antibacterial and antiinflammatory
 agents for treating periodontal disease
 INVENTOR(S): Penhasi, Adel; Reuveni, Albert; Oren, Dan
 PATENT ASSIGNEE(S): Dexcel Pharma Technologies Ltd., Israel
 SOURCE: U.S. Pat. Appl. Publ., 17 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040185009	A1	20040923	US 2003-391196	20030319
CA 2519038	A1	20041007	CA 2004-2519038	20040317
WO 2004084873	A1	20041007	WO 2004-IL252	20040317
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1608349	A1	20051228	EP 2004-757724	20040317
EP 1608349	B1	20071017		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK				
AT 375789	T	20071115	AT 2004-757724	200403

17

ES 2298787 T3 20080516 ES 2004-757724

200403

17

IN 2005DN04293 A 20070831 IN 2005-DN4293

200509

22

PRIORITY APPLN. INFO.:

US 2003-391196

A

200303

19

WO 2004-IL252

W

200403

17

AB The present invention provides an oral delivery system for the treatment of periodontal disease, being in a solid unit dosage form for administration to a patient and comprising: (i) a biodegradable or bioerodible pharmaceutically acceptable polymer; (ii) a therapeutically effective amount of at least one antibacterial agent; and (iii) a therapeutically effective amount of at least one anti-inflammatory agent, the relative weight ratio between the antibacterial agent and the anti-inflammatory agent ranging from about 7:1 to about 1:5. The system may further comprise at least one of a crosslinking agent, a plasticizing agent, a wetting agent, a suspending agent, a surfactant and a dispersing agent.

IT 111-30-8, Pentanedral

RL: RCT (Reactant); RACT (Reactant or reagent)

(solid dosage forms containing biodegradable polymer and antibacterial and antiinflammatory agents for treating periodontal disease)

RN 111-30-8 HCAPLUS

CN Pentanedral (CA INDEX NAME)

OHC- (CH₂)₃-CHO

IT 9002-89-5, Polyvinyl alcohol

36330-85-5, Fenbufen

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(solid dosage forms containing biodegradable polymer and antibacterial and antiinflammatory agents for treating periodontal disease)

RN 9002-89-5 HCAPLUS

CN Ethenol, homopolymer (CA INDEX NAME)

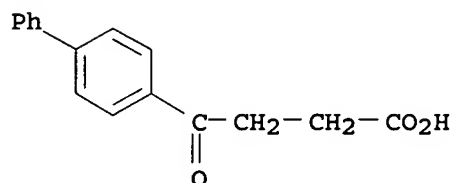
CM 1

CRN 557-75-5

CMF C2 H4 O

H₂C=CH-OH

RN 36330-85-5 HCAPLUS
 CN [1,1'-Biphenyl]-4-butanoic acid, γ -oxo- (CA INDEX NAME)



IC ICM A61K007-16
 ICS A61F009-02
 INCL 424049000
 CC 63-6 (Pharmaceuticals)
 IT Anti-inflammatory agents
 Crosslinking agents
 Dispersing agents
 Gums and Mucilages
 Human
 Periodontium, disease
 Plasticizers
 Surfactants
 Wetting agents
 (solid dosage forms containing biodegradable polymer and
 antibacterial and antiinflammatory agents for treating
 periodontal disease)
 IT 111-30-8, Pentanedial
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (solid dosage forms containing biodegradable polymer and
 antibacterial and antiinflammatory agents for treating
 periodontal disease)
 IT 53-86-1, Indomethacin 55-56-1, Chlorhexidine 56-75-7,
 Chloramphenicol 56-81-5, Glycerin, biological studies 57-62-5,
 Chlortetracycline 57-92-1, Streptomycin, biological studies
 60-54-8, Tetracycline 61-33-6, biological studies 61-68-7,
 Mefenamic acid 63-74-1, Sulfonamide 65-85-0, Benzoic acid,
 biological studies 69-72-7, Salicylic acid, biological studies
 76-22-2, Camphor 77-92-9, biological studies 79-09-4D, Propionic
 acid, derivs. 79-57-2, Oxytetracycline 88-99-3,
 1,2-Benzenedicarboxylic acid, biological studies 112-80-1, Oleic
 acid, biological studies 443-48-1, Metronidazole 530-78-9,
 Flufenamic acid 564-25-0, Doxycycline 644-62-2, Meclofenamic
 acid 1404-04-2, Neomycin 3697-42-5 5104-49-4, Flurbiprofen
 9000-01-5, Acacia gum 9000-30-0, Guar gum 9002-89-5,
 Polyvinyl alcohol 9003-05-8, Polyacryl amide
 9003-39-8, Polyvinylpyrrolidone 9004-34-6D, Cellulose, derivs.
 9005-25-8D, Starch, derivs. 11111-12-9, Cephalosporin
 15307-86-5, Diclofenac 15687-27-1, Ibuprofen 17969-20-9,
 Fenclizic acid 18472-51-0, Chlorhexidine di-gluconate
 21256-18-8, Oxaprozin. 22071-15-4, Ketoprofen 22204-53-1,
 Naproxen 25212-88-8 25249-16-5 25322-68-3 26009-03-0,
 Polyglycolic acid 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-
 ethanediyl)] 26100-51-6, Polylactic acid 26124-68-5,
 Polyglycolic acid 26171-23-3, Tolmetin 29679-58-1, Fenoprofen
 31566-31-1, Glyceryl monostearate 31842-01-0, Indoprofen
 34346-01-5, Glycolic acid-lactic acid copolymer 36322-90-4,
 Piroxicam 36330-85-5, Fenbufen 38194-50-2, Sulindac

41340-25-4, Etodolac 53716-49-7, Carprofen 53808-88-1, Lonazolac
 59804-37-4, Tenoxicam 68767-14-6, Loxoprofen 71125-38-7,
 Meloxicam 758716-16-4

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (solid dosage forms containing biodegradable polymer and
 antibacterial and antiinflammatory agents for treating
 periodontal disease)

L73 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:325936 HCAPLUS

DOCUMENT NUMBER: 137:248530

TITLE: Properties of vinyl acetate resin emulsion using
 acetoacetylated PVA as a protected
 colloid and its wood adhesion ability

AUTHOR(S): Yamada, Masaaki

CORPORATE SOURCE: Department of Agriculture, Shizuoka University,
 Japan

SOURCE: Setchaku (2002), 46(3), 115-122

CODEN: STHKAO; ISSN: 0037-0495

PUBLISHER: Kobunshi Kankokai

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB When acetoacetylated PVA (poly(vinyl
 alc.)) was used as a protective colloid to prepare a vinyl
 acetate resin emulsion as a one-component adhesive, if heat
 treatment at 120° was carried out, the acetoacetylated
 PVA was crosslinked and as a result the weight increase at the
 time of absorbing moisture became small and the nonelution rate was
 increased. When isocyanate or glyoxal aqueous solns. were used to prepare
 two-component adhesives the weight increase at the time of absorbing
 moisture became small and water-resistant adhesive strength was
 remarkably improved. And by addition of mixture of isocyanate and
 glyoxal, the adhesive strength was improved.

IT 107-22-2, Glyoxal

RL: TEM (Technical or engineered material use); USES (Uses)
 (crosslinking agent; viscoelasticity of vinyl
 acetate resin emulsion using glyoxal as a crosslinking
 agent)

RN 107-22-2 HCAPLUS

CN Ethanedial (CA INDEX NAME)

O=CH-CH=O

IT 39290-68-1

RL: TEM (Technical or engineered material use); USES (Uses)
 (properties of vinyl acetate resin emulsion using acetoacetylated
 PVA as a protected colloid and its wood adhesion ability)

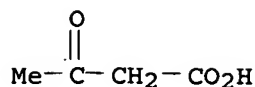
RN 39290-68-1 HCAPLUS

CN Ethenol, homopolymer, 3-oxobutanoate (CA INDEX NAME)

CM 1

CRN 541-50-4

CMF C4 H6 O3



CM 2

CRN 9002-89-5
 CMF (C2 H4 O)x
 CCI PMS

CM 3

CRN 557-75-5
 CMF C2 H4 O



- CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 43
- ST aceto acetylated PVA protected colloid vinyl acetate resin emulsion
- IT Adhesives
 (one-component; acetoacetylated PVA used as a protective colloid to prepare a vinyl acetate resin emulsion as a one-component adhesive)
- IT Wood
 (wood adhesion ability of vinyl acetate resin emulsion using acetoacetylated PVA as a protected colloid)
- IT 207308-43-8, Gohsenol GM 14L
 RL: TEM (Technical or engineered material use); USES (Uses)
 (as PVA in preparing vinyl acetate resin emulsion)
- IT 101-68-8, MDI
 RL: TEM (Technical or engineered material use); USES (Uses)
 (crosslinking agent; viscoelasticity of vinyl acetate resin emulsion using MDI as a crosslinking agent)
- IT 107-22-2, Glyoxal
 RL: TEM (Technical or engineered material use); USES (Uses)
 (crosslinking agent; viscoelasticity of vinyl acetate resin emulsion using glyoxal as a crosslinking agent)
- IT 9003-20-7D, Poly(vinyl acetate), saponified
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (properties of vinyl acetate resin emulsion using acetoacetylated PVA as a protected colloid and its wood adhesion ability)
- IT 39290-68-1
 RL: TEM (Technical or engineered material use); USES (Uses)
 (properties of vinyl acetate resin emulsion using acetoacetylated PVA as a protected colloid and its wood adhesion ability)

L73 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1997:237846 HCAPLUS
 DOCUMENT NUMBER: 126:231566
 ORIGINAL REFERENCE NO.: 126:44659a,44662a

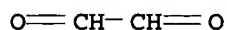
TITLE: Thermal recording material with protective layer containing casein
 INVENTOR(S): Okada, Kyomi
 PATENT ASSIGNEE(S): Oji Paper Co, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09039387	A	19970210	JP 1995-190861	19950726

PRIORITY APPLN. INFO.: JP 1995-190861 19950726

AB The recording material comprises a transparent film, a recording layer containing a leuco dye and a developer, and a protective layer containing casein and acetoacetyl-modified poly(vinyl alc.) as water-soluble polymers. The protective layer may addnl. contain a silicone emulsion to improve transparency and antisticking property. The recording material has a uniform surface and shows good antisticking property.

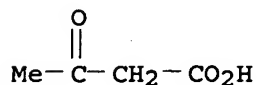
IT 107-22-2, Glyoxal
 RL: MOA (Modifier or additive use); USES (Uses)
 (crosslinking agent; transparent thermal recording material with protective layer containing casein and poly(vinyl alc.) acetoacetate to improve antisticking property)
 RN 107-22-2 HCAPLUS
 CN Ethanediol (CA INDEX NAME)



IT 39290-68-1, Gohsefimer Z 200
 RL: DEV (Device component use); USES (Uses)
 (transparent thermal recording material with protective layer containing casein and poly(vinyl alc.) acetoacetate to improve antisticking property)
 RN 39290-68-1 HCAPLUS
 CN Ethenol, homopolymer, 3-oxobutanoate (CA INDEX NAME)

CM 1

CRN 541-50-4
 CMF C4 H6 O3



CM 2

CRN 9002-89-5
CMF (C2 H4 O)x
CCI PMS

CM 3

CRN 557-75-5
CMF C2 H4 O

H₂C=CH-OH

- IC ICM B41M005-26
ICS B05D007-04; B05D007-24; B32B027-30; C08J007-04
- CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- IT Polysiloxanes, uses
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(emulsions; transparent thermal recording material with protective layer containing casein and poly(vinyl alc.) acetoacetate to improve antisticking property)
- IT Polysiloxanes, uses
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(epoxy-containing, emulsions; transparent thermal recording material with protective layer containing casein and poly(vinyl alc.) acetoacetate to improve antisticking property)
- IT Thermal printing
(transparent thermal recording material with protective layer containing casein and poly(vinyl alc.) acetoacetate to improve antisticking property)
- IT Caseins, uses
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(transparent thermal recording material with protective layer containing casein and poly(vinyl alc.) acetoacetate to improve antisticking property)
- IT 107-22-2, Glyoxal 140-95-4, Dimethylolurea
RL: MOA (Modifier or additive use); USES (Uses)
(crosslinking agent; transparent thermal recording material with protective layer containing casein and poly(vinyl alc.) acetoacetate to improve antisticking property)
- IT 39290-68-1, Gohsefimer Z 200
RL: DEV (Device component use); USES (Uses)
(transparent thermal recording material with protective layer containing casein and poly(vinyl alc.) acetoacetate to improve antisticking property)

L73 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1992:642777 HCAPLUS
DOCUMENT NUMBER: 117:242777
ORIGINAL REFERENCE NO.: 117:41832h,41833a

TITLE: Thermal recording materials with poly(vinyl alcohol)-based protective layer
 INVENTOR(S): Ueda, Shuichi; Fukui, Satoshi
 PATENT ASSIGNEE(S): Oji Paper Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 04131275	A	19920501	JP 1990-254803	199009 25

PRIORITY APPLN. INFO.: <-- JP 1990-254803
 199009
 25

AB The title materials, comprising a support with coatings of a heat-sensitive layer containing ≥ 1 basic dye and a color-developer and a protective layer based on poly(vinyl alc.) (I) and/or its modified product, contain 3-30 weight% of an ammonium salt of styrene-maleic anhydride copolymer (II) esterified with iso-Bu alc. or Bu cellosolve ($\geq 60\%$ esterification degree) and a crosslinking agent in the protective layer. The materials show good offset-printability and antisticking properties. Thus, a paper support was coated with a composition containing 3-di-n-butylamino-6-methyl-7-phenylaminofluoran and 4,4'-isopropylidenediphenol and with a protective layer containing I, ammonium salt of isobutyl-esterified II (esterification degree 70%), glyoxal, and a pigment to give a thermal recording paper.

IT 107-22-2, Glyoxal
 RL: MOA (Modifier or additive use); USES (Uses)
 (crosslinking agent, thermal recording material protective layer using)

RN 107-22-2 HCAPLUS
 CN Ethanedia (CA INDEX NAME)

O=CH-CH=O

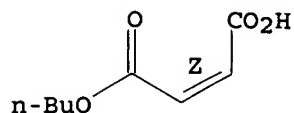
IT 25215-62-7D, Butyl maleate-styrene copolymer, ammonium salts
 RL: USES (Uses)
 (thermal recording material protective layer using)

RN 25215-62-7 HCAPLUS
 CN 2-Butenedioic acid (2Z)-, 1-butyl ester, polymer with ethenylbenzene
 (CA INDEX NAME)

CM 1

CRN 925-21-3
 CMF C8 H12 O4

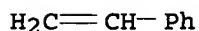
Double bond geometry as shown.



CM 2

CRN 100-42-5

CMF C8 H8



IT 9002-89-5, Poly(vinyl alcohol)

RL: USES (Uses)

(thermal recording material protective layer using, NH 17Q)

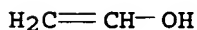
RN 9002-89-5 HCAPLUS

CN Ethenol, homopolymer (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C2 H4 O



IC ICM B41M005-26

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST thermal recording material protective layer; polyvinyl alc thermal recording material; maleate styrene copolymer thermal recording

IT Printing, nonimpact

(thermal, materials for, with poly(vinyl alc.)-based protective layer)

IT 107-22-2, Glyoxal

RL: MOA (Modifier or additive use); USES (Uses)

(crosslinking agent, thermal recording material protective layer using)

IT 25215-62-7D, Butyl maleate-styrene copolymer, ammonium salts

50658-25-8D, ammonium salts 144482-94-0D, Isobutyl maleate-styrene copolymer, ammonium salts

RL: USES (Uses)

(thermal recording material protective layer using)

IT 9002-89-5, Poly(vinyl alcohol)

RL: USES (Uses)

(thermal recording material protective layer using, NH 17Q)

L73 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1983:559434 HCAPLUS

DOCUMENT NUMBER: 99:159434

ORIGINAL REFERENCE NO.: 99:24455a,24458a

TITLE: Poly(vinyl alcohol

PATENT ASSIGNEE(S):) composition with latent water-resistance
Nippon Synthetic Chemical Industry Co., Ltd.,
Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 58059263	A	19830408	JP 1981-157778	198110 02
JP 60056755	B	19851211	JP 1981-157778	198110 02

AB A polymer composition which can give a water-resistant sheet, molding, and adhesive layer, etc., comprises (1) a water-soluble (or water-dispersible) polymer, (2) a water-soluble polymer having an acetoacetate ester group, and (3) a **crosslinking agent** reactive toward the acetoacetate in 2. Thus, 100 parts solution of poly(vinyl alc.) (I) [9002-89-5] (d.p. 1800, saponification degree 88%) 4, I acetoacetate [39290-68-1] (0.8 mol.% acetoacetylated) 6, and water 90% was mixed with 1.25 parts 40% aqueous glyoxal [107-22-2]. The mixture was cast, and left to give a 100-μ film, which was kept 8 days at 20° and 65% relative humidity. The film was immersed 1 h in water at 25° with stirring to swell 5:1 and loose 4.3% weight (dry), whereas a film prepared from the I alone was dissolved completely.

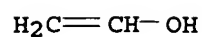
IT 107-22-2
RL: MOA (Modifier or additive use); USES (Uses)
(**crosslinking agents**, for poly(vinyl alc.) containing acetoacetate ester groups, for water-resistance improvement)
RN 107-22-2 HCAPLUS
CN Ethanedial (CA INDEX NAME)

O=CH-CH=O

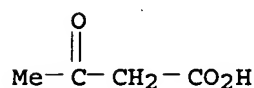
IT 9002-89-5
RL: USES (Uses)
(films, acetoacetylated poly(vinyl alc.)-containing, crosslinked, water-resistant)
RN 9002-89-5 HCAPLUS
CN Ethenol, homopolymer (CA INDEX NAME)

CM 1

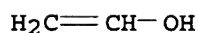
CRN 557-75-5
CMF C2 H4 O



IT 39290-68-1
 RL: USES (Uses)
 (poly(vinyl alc.) films containing,
 crosslinked, water-resistant)
 RN 39290-68-1 HCAPLUS
 CN Ethenol, homopolymer, 3-oxobutanoate (CA INDEX NAME)
 CM 1
 CRN 541-50-4
 CMF C4 H6 O3



CM 2
 CRN 9002-89-5
 CMF (C2 H4 O)x
 CCI PMS
 CM 3
 CRN 557-75-5
 CMF C2 H4 O



IC C08L101-06; C08L101-00
 CC 37-6 (Plastics Manufacture and Processing)
 ST polyvinyl alc film water resistance; glyoxal
 crosslinking agent; acetoacetylated
 polyvinyl alc crosslinking agent
 IT 107-22-2
 RL: MOA (Modifier or additive use); USES (Uses)
 (crosslinking agents, for poly(
 vinyl alc.) containing acetoacetate ester groups,
 for water-resistance improvement)
 IT 9002-89-5
 RL: USES (Uses)
 (films, acetoacetylated poly(vinyl
 alc.)-containing, crosslinked, water-resistant)
 IT 39290-68-1
 RL: USES (Uses)
 (poly(vinyl alc.) films containing,
 crosslinked, water-resistant)

=> d 174 ibib abs hitstr hitind 1-16

L74 ANSWER 1 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2005:823307 HCAPLUS
 DOCUMENT NUMBER: 143:235397
 TITLE: Intravascular delivery of nucleic acid
 INVENTOR(S): Wolff, Jon A.; Budker, Vladimir G.; Hagstrom,
 James E.; Hegge, Julia
 PATENT ASSIGNEE(S): USA
 SOURCE: U.S. Pat. Appl. Publ., 46 pp., Cont.-in-part of
 U.S. Ser. No. 855,175.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 49
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20050182013	A1	20050818	US 2004-8856	20041210
US 7015040	B2	20060321	<--	
US 20010019723	A1	20010906	US 1999-450315	19991129
US 6379966	B2	20020430	<--	
AT 342736	T	20061115	AT 2000-976999	20001106
ES 2269199	T3	20070401	ES 2000-976999	20001106
US 20030166280	A1	20030904	US 2002-85378	20020227
US 6897068	B2	20050524	<--	
US 20040242528	A1	20041202	US 2004-855175	20040527
US 20060093584	A1	20060504	US 2005-268276	20051107
PRIORITY APPLN. INFO.:			US 1999-121730P	P 19990226
			US 1999-146564P	P 19990730
			US 1999-163719P	P 19991105

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 US 1999-450315 A2 199911
 29
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 US 2000-707000 A2 200011
 06
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 US 2002-85378 A2 200202
 27
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 US 2003-473654P P 200305
 28
 <--
 US 2003-500211P P 200309
 04
 <--
 US 2004-855175 A2 200405
 27
 US 2004-8856 A3 200412
 10

AB Disclosed is a process for providing for expression of an exogenous nucleic acid in an extravascular parenchymal cell of a mammal. The nucleic acid is inserted into a vessel of a mammal and the permeability of the vessel is increased. Increasing permeability of the vessel allows delivery of the nucleic acid to an extravascular parenchymal cell.

IT 111-30-8, Glutaric dialdehyde 3128-06-1,
 4-Acetylbutyric acid 9002-89-5, Polyvinylalcohol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (intravascular delivery of nucleic acid)

RN 111-30-8 HCAPLUS

CN Pentanedial (CA INDEX NAME)

OHC-(CH₂)₃-CHO

RN 3128-06-1 HCAPLUS

CN Hexanoic acid, 5-oxo- (CA INDEX NAME)

$$\begin{array}{c} \text{O} \\ || \\ \text{Me}-\text{C}-(\text{CH}_2)_3-\text{CO}_2\text{H} \end{array}$$

RN 9002-89-5 HCAPLUS

CN Ethenol, homopolymer (CA INDEX NAME)

CM 1

CRN 557-75-5
CMF C2 H4 O

H₂C=CH-OH

IC ICM A61K048-00
ICS C12N015-85; C12N015-88
INCL 514044000; X43-545.5; X43-545.8
CC 63-6 (Pharmaceuticals)
IT 56-81-5, Glycerol, reactions 56-89-3, L-Cystine, reactions
69-78-3, 5,5'-Dithiobis(2-nitrobenzoic acid) 75-09-2,
Dichloromethane, reactions 108-30-5, Succinic anhydride, reactions
111-30-8, Glutaric dialdehyde 112-57-2,
Tetraethylenepentamine 121-44-8, Triethylamine, reactions
616-02-4, Citraconic anhydride 3128-06-1, 4-Acetylbutyric
acid 4067-16-7, Pentaethylenehexamine 4097-89-6,
Tris(2-aminoethyl)amine 4741-99-5, N,N'-Bis(2-aminoethyl)-1,3-
propanediamine 6066-82-6, N-Hydroxysuccinimide 6192-52-5,
p-Toluenesulfonic acid monohydrate 7087-68-5,
Diisopropylethylamine 7209-38-3, 1,4-Bis(3-aminopropyl)piperazine
9002-89-5, Polyvinylalcohol 25619-78-7,
Poly-L-tyrosine 25667-16-7 38000-06-5, Poly-L-lysine
52328-05-9, O-Methylisourea hydrogen sulfate 58632-95-4,
2-(tert-Butoxycarbonyloxymino)-2-phenylacetone nitrile 59269-51-1,
Polyvinylphenol 289888-08-0, 5,5'-Dithiobis(2-nitrobenzoic
acid)-Pentaethylenehexamine Copolymer 289888-09-1,
5,5'-Dithiobis(2-nitrobenzoic acid)-Tetraethylenepentamine Copolymer
289888-10-4, 5,5'-Dithiobis(2-nitrobenzoic acid)-
Tetraethylenepentamine-Tris(2-aminoethyl)amine Copolymer
289888-12-6, 5,5'-Dithiobis(2-nitrobenzoic acid)-N,N'-Bis(2-
aminoethyl)-1,3-propanediamine-Tris(2-aminoethyl)amine Copolymer
289888-18-2, 1,4-Bis(3-aminopropyl)piperazine Glutaric
Dialdehyde Copolymer
RL: RCT (Reactant); RACT (Reactant or reagent)
(intravascular delivery of nucleic acid)
IT 616-02-4DP, Citraconic anhydride, reaction product with
polyvinylphenol 766-39-2DP, 2,3-Dimethylmaleic anhydride, reaction
product with poly-L-lysine 25104-18-1DP, Poly-L-lysine, reaction
product with citraconic anhydride 25619-78-7DP, Poly-L-tyrosine,
reaction product with citraconic anhydride 25667-16-7DP, reaction
product with citraconic anhydride 26742-84-7DP, Polyvinyl phenyl
ketone, reaction products with glycerol and succinic
anhydride 38000-06-5DP, Poly-L-lysine, reaction product with
citraconic anhydride 59269-51-1DP, Polyvinylphenol, reaction
product with citraconic anhydride
RL: SPN (Synthetic preparation); PREP (Preparation)
(intravascular delivery of nucleic acid)
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN
THE RE FORMAT

L74 ANSWER 2 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:681380 HCAPLUS
DOCUMENT NUMBER: 141:212745
TITLE: Delivery of siRNA to cells using polyampholytes
INVENTOR(S): Trubetskoy, Vladimir S.; Rozema, David B.;
Monahan, Sean D.; Budker, Vladimir G.; Hagstrom,
James E.; Wolff, Jon A.

PATENT ASSIGNEE(S): USA
 SOURCE: U.S. Pat. Appl. Publ., 24 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040162235	A1	20040819	US 2003-368139	20030218
WO 2004076674	A1	20040910	WO 2003-US12949	20030428
W: JP				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
EP 1620560	A1	20060201	EP 2003-743755	20030428
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK				
PRIORITY APPLN. INFO.: US 2003-368139			A	20030218
WO 2003-US12949			W	20030428

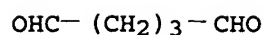
AB A polyampholyte is utilized in a complex with siRNA for purposes of siRNA delivery to a cell. The complex can be formed with an appropriate amount of pos. and/or neg. charge such that the resulting complex can be delivered into a cell in vivo or in vitro. For example, complexes containing siRNA/branched PEI (brPEI) were toxic to mice and provided no inhibition of firefly luciferase activity. siRNA/brPEI complexes recharged with poly(aspartic acid) (pAsp) were less toxic than siRNA/brPEI complexes, but did not result in siRNA-mediated inhibition of luciferase activity (10-20% inhibition of luciferase expression). However, when siRNA-containing complexes were made using brPEI-pAsp polyampholytes, PEI toxicity was reduced and siRNA was functionally delivered to lung cells. Polyampholyte-mediated delivery of siRNA resulted in the gene-specific inhibition of firefly luciferase expression by 60%.

IT 111-30-8, Glutaric dialdehyde 692-29-5,
 Succinic semialdehyde 9002-89-5,
 Polyvinyl alcohol

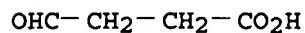
RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of polyampholytes for siRNA delivery to cells)

RN 111-30-8 HCAPLUS

CN Pentanedial (CA INDEX NAME)



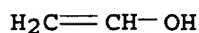
RN 692-29-5 HCAPLUS
CN Butanoic acid, 4-oxo- (CA INDEX NAME)



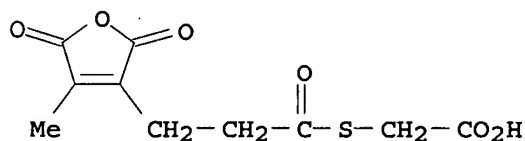
RN 9002-89-5 HCAPLUS
CN Ethenol, homopolymer (CA INDEX NAME)

CM 1

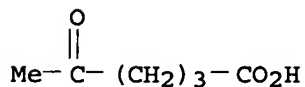
CRN 557-75-5
CMF C2 H4 O



IT 627079-21-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(preparation of polyampholytes for siRNA delivery to cells)
RN 627079-21-4 HCAPLUS
CN Acetic acid, 2-[[3-(2,5-dihydro-4-methyl-2,5-dioxo-3-furanyl)-1-oxopropyl]thio]- (CA INDEX NAME)



IT 3128-06-1DP, 4-Acetylbutyric acid, polyvinyl
alc. ketal derivs. 9002-89-5DP, dioxolane/succinic
and acetylbutyric derivs.
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL
(Biological study); PREP (Preparation); USES (Uses)
(preparation of polyampholytes for siRNA delivery to cells)
RN 3128-06-1 HCAPLUS
CN Hexanoic acid, 5-oxo- (CA INDEX NAME)

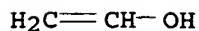


RN 9002-89-5 HCAPLUS
CN Ethenol, homopolymer (CA INDEX NAME)

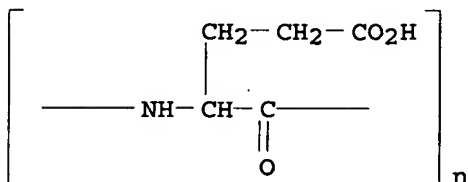
CM 1

CRN 557-75-5

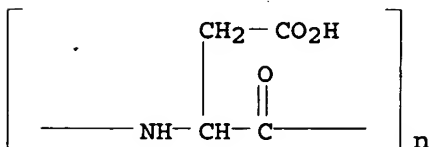
CMF C2 H4 O



IT 24991-23-9 26063-13-8, Polyaspartic acid
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (preparation of polyampholytes for siRNA delivery to cells)
 RN 24991-23-9 HCAPLUS
 CN Poly[imino[(1S)-1-(2-carboxyethyl)-2-oxo-1,2-ethanediyl]] (CA INDEX NAME)



RN 26063-13-8 HCAPLUS
 CN Poly[imino[(1S)-1-(carboxymethyl)-2-oxo-1,2-ethanediyl]] (CA INDEX NAME)



IC ICM A61K048-00
 INCL 514008000; 514044000; 424486000
 CC 63-6 (Pharmaceuticals)
 Section cross-reference(s): 3, 35
 IT 56-81-5, Glycerol, reactions 68-11-1, Mercaptoacetic acid, reactions 79-37-8, Oxalyl chloride 110-75-8, 2-Chloroethyl vinyl ether 111-30-8, Glutaric dialdehyde 112-90-3, Oleylamine 298-12-4, Glyoxylic acid 515-94-6, 2,3-Diaminopropionic acid 692-29-5, Succinic semialdehyde 766-39-2, 2,3-Dimethylmaleic anhydride 1009-61-6, 1,4-Diacetylbenzene 1074-82-4, Potassium phthalimide 2163-48-6, Diethylpropyl malonate 3699-66-9, Triethyl-2-phosphonopropionate 5036-48-6, 1-(3-Aminopropyl)imidazole 6066-82-6, N-Hydroxysuccinimide 7209-38-3, 1,4-Bis(3-aminopropyl)piperazine 9002-89-5, Polyvinyl alcohol 10389-65-8 13192-04-6, Dimethyl 2-oxoglutarate 13726-67-5, N-(tert-Butoxycarbonyl)-L-aspartic acid 13822-56-5, 3-Aminopropyltrimethoxysilane 22483-09-6, Aminoacetaldehyde dimethyl acetal 29022-11-5, Fmoc-glycine 30551-89-4D, Polyallylamine, amino acid conjugate derivs. 37231-28-0, Melittin 60129-38-6 67995-63-5, Pardaxin 149942-14-3 167700-44-9 212626-14-7 289888-16-0
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of polyampholytes for siRNA delivery to cells)
 IT 487-66-1DP, aldehyde/amino acid derivs. 487-66-1P

26742-84-7DP, reaction products with glycerol 39654-47-2P
 67643-67-8P 313048-70-3P 313049-16-0P, MC 216 313049-22-8P, MC
 211 313049-25-1P, MC 225 313049-26-2P, MC 372 313049-27-3P, MC
 373 313058-14-9DP, polyallylamine conjugate derivs. 313271-83-9P
 627079-21-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
 RACT (Reactant or reagent)

(preparation of polyampholytes for siRNA delivery to cells)

IT 487-66-1DP, reaction products with melittin/pardaxin and amino acid
 polymers 766-39-2DP, conjugates with polymers 3128-06-1DP
 , 4-Acetylbutyric acid, polyvinyl alc. ketal
 derivs. 9002-89-5DP, dioxolane/succinic and acetylbutyric
 derivs. 9011-16-9DP, MC 510, histidine/histamine derivs.
 9011-16-9P, MC 486 22483-09-6DP, polyvinyl derivs. 25513-46-6DP,
 aldehyde derivs., reaction products with melittin/pardaxin
 31195-43-4P 37231-28-0DP, Melittin, conjugates with polymers
 41306-56-3DP, 1H-Imidazole-2-propanamine, polyvinyl derivs.
 138134-74-4P 147938-60-1P 149942-14-3DP, polycation derivs.
 289888-17-1P, MC 151 313049-45-5P, MC 217 313050-83-8P
 313050-85-0DP, reduced 313050-85-0P, MC 208 313050-86-1P, MC 300
 313050-87-2P, MC 218 313050-88-3P, MC 226 313050-90-7P, MC 227
 313050-93-0P, MC 321 313050-95-2P, MC 322 313050-96-3P, MC 229
 313050-98-5P, MC 323 313051-09-1P, MC 325 313051-18-2P, MC 326
 313051-28-4P, MC 330 313051-29-5P, MC 331 313051-30-8P, MC 312
 313051-31-9P, MC 332 313051-32-0P, MC 340 313051-33-1P, MC 347
 313051-34-2P, MC 339 313051-35-3P, MC 346 313051-36-4P, MC 352
 313051-37-5P, MC 357 313058-18-3P 313058-19-4P, MC 324
 371246-56-9P 371246-66-1P 618106-39-1P, MC 222 618106-46-0P,
 MC 369 618107-18-9P, MC 221 618114-23-1DP, succinic
 semialdehyde derivs. 618114-23-1P, MC 196 639070-47-6P,
 DW 291 741284-09-3P 741284-15-1P, DW 163 741284-19-5P
 741284-21-9P 742087-16-7P, MC 301 (polyampholyte) 742087-90-7P,
 MC 358 742088-23-9P, MC 366 742088-24-0P, MC 367 742088-26-2P,
 MC 370 742088-28-4P, MC 360 742091-41-4P, DW 297 742091-42-5P,
 DW 301 (polymer)

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL
 (Biological study); PREP (Preparation); USES (Uses)

(preparation of polyampholytes for siRNA delivery to cells)

IT 9002-98-6, PEI 9002-98-6D, PEI, succinylated 9003-01-4,
 Polyacrylic acid 9004-61-9, Hyaluronic acid 9005-49-6, Heparin,
 biological studies 9042-14-2, Dextran sulfate 24991-23-9
 25087-26-7, Polymethacrylic acid 25104-18-1, Poly(L-lysine)
 25513-46-6, Polyglutamic acid 25608-40-6, Polyaspartic acid
 26063-13-8, Polyaspartic acid 38000-06-5, Poly(L-lysine)
 38000-06-5D, succinylated, reactions with methylmaleic anhydride and
 peptides

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(preparation of polyampholytes for siRNA delivery to cells)

L74 ANSWER 3 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:466800 HCAPLUS

DOCUMENT NUMBER: 141:31131

TITLE: Thermal printing material with layer containing
 poly(vinyl alcohol)
 derivative

INVENTOR(S): Ono, Hiroyuki; Shibuya, Mitsuo

PATENT ASSIGNEE(S): Nippon Synthetic Chemical Industry Co., Ltd.,
 Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004160862	A	20040610	JP 2002-330255	20021114

PRIORITY APPLN. INFO.: JP 2002-330255 20021114

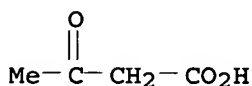
AB The material has a layer containing (A) poly(vinyl alc.) having aldehyde group on the side chain and (B) water-soluble resin having active H group. The material shows good water resistance and antisticking property.

IT 39290-68-1P, Poly(vinyl alcohol) acetoacetate
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (thermal printing material with layer containing poly(vinyl alc.) derivative)

RN 39290-68-1 HCAPLUS
 CN Ethenol, homopolymer, 3-oxobutanoate (CA INDEX NAME)

CM 1

CRN 541-50-4
 CMF C4 H6 O3

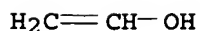


CM 2

CRN 9002-89-5
 CMF (C2 H4 O)x
 CCI PMS

CM 3

CRN 557-75-5
 CMF C2 H4 O



IT 107-22-2, Glyoxal
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (waterproofing agent; thermal printing material with layer containing

poly(vinyl alc.) derivative)
RN 107-22-2 HCAPLUS
CN Ethanedial (CA INDEX NAME)

O=CH-CH=O

IC ICM B41M005-26
CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST thermal printing material polyvinyl alc aldehyde; water soluble resin layer thermal printing material
IT Thermal printing materials Waterproofing agents (thermal printing material with layer containing poly(vinyl alc.) derivative)
IT 26838-26-6DP, Allylidene diacetate-vinyl acetate copolymer, saponified 27435-32-1DP, Diacetoneacrylamide-vinyl acetate copolymer, saponified 39290-68-1P, Poly(vinyl alcohol) acetoacetate 187160-36-7DP, Thioacetic acid-vinyl acetate telomer, saponified
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses). (thermal printing material with layer containing poly(vinyl alc.) derivative)
IT 29792-49-2, PVAM 0595B
RL: TEM (Technical or engineered material use); USES (Uses) (thermal printing material with layer containing poly(vinyl alc.) derivative)
IT 107-22-2, Glyoxal
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses) (waterproofing agent; thermal printing material with layer containing poly(vinyl alc.) derivative)

L74 ANSWER 4 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:452925 HCAPLUS
DOCUMENT NUMBER: 141:17570
TITLE: Intravascular delivery of nonviral nucleic acid
INVENTOR(S): Hagstrom, James E.; Wolff, Jon A.; Monahan, Sean D.; Rozema, David B.; Budker, Vladimir G.; Slattum, Paul M.; Lewis, David L.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 35 pp., Cont.-in-part of U.S. Ser. No. 447,966.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 49
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040106567	A1	20040603	US 2003-609938	20030630

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US 20010008882 A1 20010719 US 1999-391260 199909
07

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US 20010004636 A1 20010621 US 1999-447966 199911
23

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US 6627616 B2 20030930
WO 2005009476 A1 20050203 WO 2003-US25737 200308
18

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W: JP
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU,
IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR
EP 1667728 A1 20060614 EP 2003-810873 200308
18

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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,
PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK
PRIORITY APPLN. INFO.: US 1999-391260 A2 199909
07

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US 1999-447966 A2 199911
23

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US 1995-571536 A 199512
13

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US 1997-975573 A1 199711
21

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US 2003-609938 A 200306
30

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WO 2003-US25737 W 200308
18

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AB The process comprises designing a polynucleotide, such as an siRNA, for transfection. The polynucleotide is inserted into a mammalian vessel such as an artery. Prior to insertion, subsequent to insertion, or concurrent with insertion, volume in the vessel is increased allowing the polynucleotide delivery to the parenchymal cell. In one preferred embodiment, a process is described for delivering a polynucleotide into a parenchymal cell of a mammal, comprising making a polynucleotide such as a nucleic acid, then inserting the polynucleotide into a mammalian vessel (e.g. a blood vessel) and increasing the permeability of the vessel, finally delivering the polynucleotide to the parenchymal cell thereby altering endogenous properties of the cell. Increasing the permeability of the vessel consists of increasing pressure against vessel walls. Increasing the pressure consists of increasing a volume

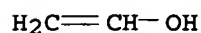
of fluid within the vessel. Increasing the volume consists of inserting the polynucleotide in a solution into the vessel wherein the solution contains a compound which complexes with the polynucleotide. Preparation of polymers (e.g. L-cystine-1,4-bis(3-aminopropyl)piperazine copolymer) complexable with polynucleotides is also included.

IT 9002-89-5DP, acetylbutyric ketal derivs.
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(intravascular delivery of nonviral nucleic acid)
RN 9002-89-5 HCAPLUS
CN Ethenol, homopolymer (CA INDEX NAME)

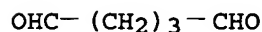
CM 1

CRN 557-75-5

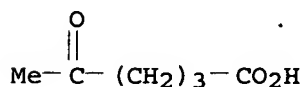
CMF C2 H4 O



IT 111-30-8, Glutaric dialdehyde 3128-06-1,
4-Acetylbutyric acid 9002-89-5, Polyvinyl
alcohol
RL: RCT (Reactant); RACT (Reactant or reagent)
(intravascular delivery of nonviral nucleic acid)
RN 111-30-8 HCAPLUS
CN Pentanedial (CA INDEX NAME)



RN 3128-06-1 HCAPLUS
CN Hexanoic acid, 5-oxo- (CA INDEX NAME)

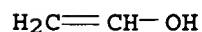


RN 9002-89-5 HCAPLUS
CN Ethenol, homopolymer (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C2 H4 O



IC ICM A61K048-00
INCL 514044000
CC 1-1 (Pharmacology)
Section cross-reference(s): 35, 63
IT 9002-89-5DP, acetylbutyric ketal derivs. 25667-16-7DP,
citraconyl derivs. 38000-06-5DP, citraconyl/methylmaleic derivs.

289888-18-2P 313050-91-8P 680571-12-4P
 RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (intravascular delivery of nonviral nucleic acid)

IT 56-81-5, Glycerol, reactions 56-89-3, L-Cystine, reactions 69-78-3, 5,5'-Dithiobis(2-nitrobenzoic acid) 105-83-9, 3,3'-Diamino-N-methyldipropylamine 108-30-5, Succinic anhydride, reactions 109-78-4, 3-Hydroxypropionitrile 111-30-8, Glutaric dialdehyde 112-57-2, Tetraethylenepentamine 616-02-4, Citraconic anhydride 766-39-2, 2,3-Dimethylmaleic anhydride 3128-06-1, 4-Acetylbutyric acid 4067-16-7, Pentaethylenehexamine 4097-89-6, Tris(2-aminoethyl)amine 4741-99-5 6066-82-6, N-Hydroxysuccinimide 7209-38-3, 1,4-Bis(3-aminopropyl)piperazine 9002-89-5, Polyvinyl alcohol 24424-99-5, Boc anhydride 25619-78-7, Poly-L-tyrosine 25667-16-7 26742-84-7, Polyvinyl phenyl ketone 52328-05-9, O-Methylisourea hydrogen sulfate 58632-95-4 59269-51-1, Polyvinylphenol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (intravascular delivery of nonviral nucleic acid)

L74 ANSWER 5 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:100662 HCAPLUS
 DOCUMENT NUMBER: 140:160084
 TITLE: Biochips for characterizing biological processes
 INVENTOR(S): Kreimer, David I.; Nufert, Thomas H.; Ginzburg, Lev; Yevin, Oleg A.
 PATENT ASSIGNEE(S): USA
 SOURCE: U.S. Pat. Appl. Publ., 71 pp., Cont.-in-part of U.S. Ser. No. 925,189.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 9
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040023293	A1	20040205	US 2002-294385	20021114
US 20010053521	A1	20011220	US 2001-815909	20010323
US 20020132371	A1	20020919	US 2001-925189	20010808
WO 2002077558	A2	20021003	WO 2002-US8858	20020322
WO 2002077558	A3	20071122		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,				

NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ,
 TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE,
 CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,
 SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
 SN, TD, TG, AP, EA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, EP,
 OA

AU 2002255883	A1	20021008	AU 2002-255883	200203 22
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TW 530146	B	20030501	TW 2002-91105672	200203 22
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US 20030180720	A1	20030925	US 2003-364160	200302 11
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PRIORITY APPLN. INFO.:			US 1999-156195P	P 199909 27
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			US 2001-815909	A2 200103 23
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			US 2001-925189	A2 200108 08
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200202
11

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WO 2002-US8858

W

200203
22

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US 2002-294385

A2

200211
14

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US 2002-298725

A2

200211
18

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AB This invention includes biochips for anal. of a variety of mols., cell components and cells. Embodiments of this invention include devices and methods for the parallel and/or nearly parallel processing of biol. analytes. Biochips can comprise a substrate, Raman signal-enhancing structures, and receptors selective and/or specific for the analyte(s) to be assayed. Biochips can be read using a Raman reader and can provide for rapid, sensitive, direct assays for physiol. and/or pathophysiol. conditions of interest. Gold-coated quartz slides with silver fractal aggregates as enhancing agents and immobilized reduced glutathione as receptor were used to detect glutathione S-transferase by Raman spectroscopy.

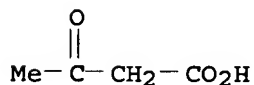
IT 541-50-4, Acetoacetic acid, analysis 542-78-9,
Malondialdehyde

RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)

(analyte; biochips having analyte-specific receptors and enhancing particle structures on substrates for characterizing biol. processes)

RN 541-50-4 HCAPLUS

CN Butanoic acid, 3-oxo- (CA INDEX NAME)



RN 542-78-9 HCAPLUS

CN Propanedial (9CI) (CA INDEX NAME)



IT 9002-89-5, Poly(vinyl alcohol)

RL: NUU (Other use, unclassified); USES (Uses)

(in preparation of fractal silver aggregates; biochips having analyte-specific receptors and enhancing particle structures on substrates for characterizing biol. processes)

RN 9002-89-5 HCAPLUS

CN Ethenol, homopolymer (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C2 H4 O

 $\text{H}_2\text{C}=\text{CH}-\text{OH}$

IC ICM G01N033-53
ICS G01N033-574; C12M001-34
INCL 435007100; 435007230; 435287200
CC 9-1 (Biochemical Methods)
IT 50-21-5, Lactic acid, analysis 50-67-9, Serotonin, analysis
50-99-7, D-Glucose, analysis 53-57-6, NADPH 53-59-8, NADP+
53-84-9, NAD+ 56-65-5, 5'-ATP, analysis 56-73-5, Glucose
6-phosphate 57-00-1, Creatine 57-03-4, Glycerol 3-phosphate
57-60-3, Pyruvate, analysis 58-64-0, 5'-ADP, analysis 58-68-4,
NADH 60-92-4, CAMP 61-19-8, AMP, analysis 63-39-8, UTP
65-47-4, CTP 67-07-2, Creatine phosphate 72-89-9, Acetyl Co-A
86-01-1, GTP 108-24-7, Acetyl acetate 113-21-3, Lactate,
analysis 138-08-9, Phosphoenolpyruvic acid 300-85-6 365-08-2,
DTTP 541-50-4, Acetoacetic acid, analysis 542-78-9
, Malondialdehyde 590-54-5, Acetyl phosphate
1910-41-4, FADH 1927-31-7, DATP 1981-49-3, 1,3-
Diphosphoglycerate 2056-98-6, DCTP 2564-35-4, DGTP 9001-05-2,
Catalase 9001-12-1, MMP-1 9001-48-3, Glutathione reductase
9001-68-7, NADPH oxidoreductase 9001-90-5, Plasmin 9007-43-6,
Cytochrome-C, analysis 9013-66-5, Glutathione peroxidase
9025-26-7, Cathepsin-D 9031-37-2, Ceruloplasmin 9035-34-1,
Cytochrome-A 9035-37-4, Cytochrome b 9035-68-1, Proinsulin
9047-22-7, Cathepsin B 9054-89-1, Superoxide dismutase
9059-22-7, Heme oxygenase 27025-41-8, Oxidized glutathione
39287-99-5, Pro MMP-1 39391-18-9, Prostaglandin H synthetase
60616-82-2, Cathepsin-L 81669-70-7, Metalloproteinase
124861-55-8, TIMP-2 125978-95-2, Nitric oxide synthetase
127464-60-2, Vascular endothelial growth factor 140208-24-8,
TIMP-1 145809-21-8, TIMP-3 146480-35-5, MMP 2 146480-36-6, MMP
9 148969-98-6, Pro MMP-2 152787-66-1, Pro MMP-9 169592-56-7,
Caspase-3 176742-42-0, Pro-cathepsins 182372-14-1, Caspase-2
214894-56-1 329900-75-6, Cyclooxygenase 2 329967-85-3,
Cyclooxygenase 1 570400-25-8
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST
(Analytical study); BIOL (Biological study)
(analyte; biochips having analyte-specific receptors and
enhancing particle structures on substrates for characterizing
biol. processes)
IT 68-04-2, Sodium citrate 7647-14-5, Sodium chloride, uses
9002-89-5, Poly(vinyl alcohol)
16940-66-2
RL: NUU (Other use, unclassified); USES (Uses)
(in preparation of fractal silver aggregates; biochips having
analyte-specific receptors and enhancing particle structures on
substrates for characterizing biol. processes)

L74 ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:453489 HCAPLUS
DOCUMENT NUMBER: 135:41003
TITLE: Intravascular delivery of non-viral nucleic acid
INVENTOR(S): Monahan, Sean D.; Wolf, Jon A.; Slatum, Paul
M.; Hagstrom, James E.; Budker, Vladimir G.;
Rozema, David B.
PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 19 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
US 20010004636 A1		20010621US	1999-447966	199911 23

AB Disclosed is a process for transfecting genetic material into a mammalian cell to alter endogenous properties of the cell. The process comprises designing a polynucleotide for transfection. Then the polynucleotide is inserted into a mammalian vessel such as a tail vein or artery. Prior to insertion, subsequent to insertion, or concurrent with insertion the permeability of the vessel is increased thereby the genetic material is delivered to the parenchymal cell altering endogenous properties of the cell. The naked polynucleotide is complexed prior to delivery with amphipathic compds., polymers, or other nonviral vectors. Syntheses are described for the preparation of several activated disulfide-containing co-monomers and of pH-cleavable polymers for intracellular compartment release.

IT 9002-89-5DP, Polyvinyl alcohol, reaction products with 5-oxohexanoic acid
RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(intravascular delivery of non-viral nucleic acid)

RN 9002-89-5 HCAPLUS
CN Ethenol, homopolymer (CA INDEX NAME)

CM 1

CRN 557-75-5
CMF C2 H4 O

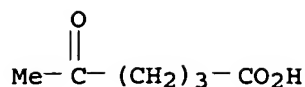
$\text{H}_2\text{C}=\text{CH}-\text{OH}$

IT 111-30-8, Pentanedial 3128-06-1, 4-Acetylbutyric acid 9002-89-5, Polyvinyl alcohol
RL: RCT (Reactant); RACT (Reactant or reagent)
(intravascular delivery of non-viral nucleic acid)

RN 111-30-8 HCAPLUS
CN Pentanedial (CA INDEX NAME)

$\text{OHC}-(\text{CH}_2)_3-\text{CHO}$

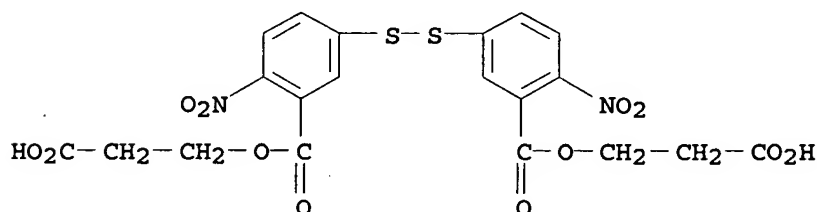
RN 3128-06-1 HCAPLUS
CN Hexanoic acid, 5-oxo- (CA INDEX NAME)



RN 9002-89-5 HCAPLUS
 CN Ethenol, homopolymer (CA INDEX NAME)
 CM 1
 CRN 557-75-5
 CMF C2 H4 O



IT 289888-04-6P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
 RACT (Reactant or reagent)
 (intravascular delivery of non-viral nucleic acid)
 RN 289888-04-6 HCAPLUS
 CN Benzoic acid, 3,3'-dithiobis[6-nitro-, bis(2-carboxyethyl) ester
 (9CI) (CA INDEX NAME)



IC ICM A61K031-70
 ICS A01N043-04; C07H021-04
 INCL 514044000
 CC 1-1 (Pharmacology)
 Section cross-reference(s): 3
 IT 9002-89-5DP, Polyvinyl alcohol, reaction
 products with 5-oxohexanoic acid 25104-18-1DP, Poly(L-lysine),
 reaction products with citraconic anhydride or dimethylmaleic
 anhydride 25619-78-7DP, Poly(L-tyrosine), reaction products with
 citraconic anhydride 25667-16-7DP, reaction products with
 citraconic anhydride 26742-84-7DP, Poly(vinyl phenyl
 ketone), reaction products with glycerol or with glycerol
 and succinic anhydride 38000-06-5DP, Poly(L-lysine), reaction
 products with citraconic anhydride or dimethylmaleic anhydride
 59269-51-1DP, Polyvinylphenol, reaction products with citraconic
 anhydride 209517-47-5P 289888-07-9P 289888-08-0P
 289888-09-1P 289888-10-4P 289888-11-5P 289888-12-6P
 289888-14-8P 289888-15-9P 289888-17-1P 289888-18-2P
 RL: BUU (Biological use, unclassified); SPN (Synthetic preparation);
 THU (Therapeutic use); BIOL (Biological study); PREP (Preparation);
 USES (Uses)
 (intravascular delivery of non-viral nucleic acid)
 IT 56-81-5, 1,2,3-Propanetriol, reactions 56-89-3, L-Cystine,

reactions 69-78-3, 5,5'-Dithiobis(2-nitrobenzoic acid) 105-83-9
 109-78-4, 3-Hydroxypropionitrile 111-30-8, Pentanedial
 112-57-2, Tetraethylenepentamine 616-02-4, Citraconic anhydride
 766-39-2, 2,3-Dimethylmaleic anhydride 3128-06-1,
 4-Acetylbutyric acid 4067-16-7, Pentaethylenehexamine 4097-89-6,
 Tris(2-aminoethyl)amine 4741-99-5, N,N'-Bis(2-aminoethyl)-1,3-
 propanediamine 6066-82-6, N-Hydroxysuccinimide 7209-38-3,
 1,4-Bis(3-aminopropyl)piperazine 9002-89-5,
 Polyvinyl alcohol 10389-65-8 13551-09-2
 25104-18-1, Poly(L-lysine 25619-78-7, Poly(L-tyrosine)
 25667-16-7 26742-84-7, Poly(vinyl phenyl ketone)
 38000-06-5, Poly(L-lysine) 52328-05-9, O-Methylisourea hydrogen
 sulfate 58632-95-4, 2-tert-Butoxycarbonyloxyimino)-2-
 phenylacetoneitrile 59269-51-1, Polyvinylphenol 289888-16-0
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (intravascular delivery of non-viral nucleic acid)
 IT 60129-38-6P 109970-44-7P 210292-23-2P 289888-04-6P
 289888-06-8P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
 RACT (Reactant or reagent)
 (intravascular delivery of non-viral nucleic acid)

L74 ANSWER 7 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:143697 HCAPLUS

DOCUMENT NUMBER: 134:180034

TITLE: Water-thinned compositions with good miscibility
 and solvent-resistant aqueous coatings and those
 for ink-jet printing paper using the
 compositions

INVENTOR(S): Tanimoto, Seiji

PATENT ASSIGNEE(S): Kuraray Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2001055479	A	20010227	JP 1999-233674	199908 20
			<--	
JP 4053192	B2	20080227		
PRIORITY APPLN. INFO.:			JP 1999-233674	199908 20
			<--	

AB The coatings for ink-jet printing receptor comprise water-thinned
 compns. composed of (A) aqueous polyurethane emulsions prepared by
 reaction of NCO-having urethane prepolymers with primary OH- and/or
 acetoacetyl-having vinyl alc. polymers and amino- or OH-having
 low-mol.-weight compds., (B) vinyl alc. polymers, and (C)
 polyamide-epichlorohydrin resins, epoxy compds., aldehydes
 , and/or isocyanates as waterproofing agents. Thus, a composition containing
 (A) 50 parts polyurethane emulsion [prepared from urethane prepolymers
 [obtained by reaction of adipic acid-3-methyl-1,5-pentanediol
 copolymer diol, IPDI, and 2,2-bis(hydroxymethyl)propionic acid],

amino-containing vinyl alc. polymer (obtained by reaction of allyl glycidyl ether-vinyl acetate copolymer with 2-aminothiophenol and saponification), diethylenetriamine, and isophorone diamine], (B) 100 parts amino-containing vinyl alc. polymer, and (C) 10 parts Epiol E 100 showed good storage stability, and water and solvent resistance when applied on ink-jet printing sheets.

IT 326603-70-7P, Poly(vinyl alcohol

) acetoacetyl ester, polymer with adipic acid, 3-methyl-1,5-pentanediol, IPDI, 2,2-bis(hydroxymethyl)propionic acid and diethylenetriamine

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(water-thinned compns. with good miscibility and solvent and water resistance for coatings of ink-jet printing sheets)

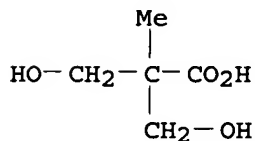
RN 326603-70-7 HCAPLUS

CN Hexanedioic acid, polymer with N-(2-aminoethyl)-1,2-ethanediamine, ethenol homopolymer 3-oxobutanoate, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and 3-methyl-1,5-pentanediol (9CI) (CA INDEX NAME)

CM 1

CRN 4767-03-7

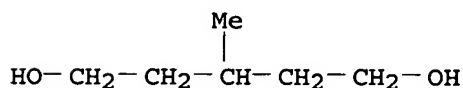
CMF C5 H10 O4



CM 2

CRN 4457-71-0

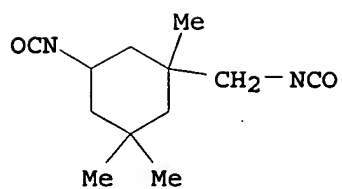
CMF C6 H14 O2



CM 3

CRN 4098-71-9

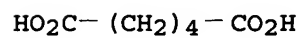
CMF C12 H18 N2 O2



CM 4

CRN 124-04-9

CMF C6 H10 O4



CM 5

CRN 111-40-0

CMF C4 H13 N3



CM 6

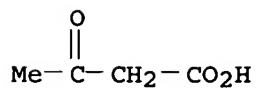
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CMF C4 H6 O3 . x (C2 H4 O)x

CM 7

CRN 541-50-4

CMF C4 H6 O3



CM 8

CRN 9002-89-5

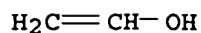
CMF (C2 H4 O)x

CCI PMS

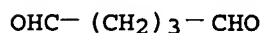
CM 9

CRN 557-75-5

CMF C2 H4 O



IT 111-30-8, Glutaraldehyde
 RL: PRP (Properties); TEM (Technical or engineered material use);
 USES (Uses)
 (water-thinned compns. with good miscibility and solvent and
 water resistance for coatings of ink-jet printing sheets)
 RN 111-30-8 HCAPLUS
 CN Pentanedial (CA INDEX NAME)



IT 9002-89-5D, Poly(vinyl alcohol
), amino-, acetoacetyl-, or ethylene-containing
 RL: TEM (Technical or engineered material use); USES (Uses)
 (water-thinned compns. with good miscibility and solvent and
 water resistance for coatings of ink-jet printing sheets)
 RN 9002-89-5 HCAPLUS
 CN Ethenol, homopolymer (CA INDEX NAME)

CM 1

CRN 557-75-5
 CMF C2 H4 O



IC ICM C08L029-04
 ICS C08L029-04; C08K005-07; C08L063-00; C08L075-04; C08L077-06;
 C09D005-02; C09D007-12; C09D129-04; C09D175-12
 CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 43
 IT 60-24-2DP, 2-Mercaptoethanol, reaction products with allyl glycidyl
 ether-vinyl acetate copolymer, polymers with polyols,
 polyisocyanates, and polyamines 111-40-0DP, Diethylenetriamine,
 polymers with vinyl acetate polymers, polyols, polyisocyanates, and
 polyamines 124-04-9DP, Adipic acid, polymers with vinyl acetate
 polymers, polyols, polyisocyanates, and polyamines 2855-13-2DP,
 Isophoronediamine, polymers with vinyl acetate polymers, polyols,
 polyisocyanates, and polyamines 4098-71-9DP, IPDI, polymers with
 vinyl acetate polymers, polyols, and polyamines 4457-71-0DP,
 3-Methyl-1,5-pentanediol, polymers with adipic acid, vinyl acetate
 polymers, polyols, polyisocyanates, and polyamines 4767-03-7DP,
 2,2-Bis(hydroxymethyl)propionic acid, polymers with vinyl acetate
 polymers, polyols, polyisocyanates, and polyamines 31048-51-8DP,
 Allyl glycidyl ether-vinyl acetate copolymer, reaction products with
 2-mercaptoethanol, polymers with polyols, polyisocyanates, and
 polyamines 299179-03-6DP, Allyl glycidyl ether-vinyl
 acetate-2-aminothiophenol copolymer, saponified, polymers with polyols,
 polyisocyanates, and polyamines 326603-70-7P, Poly
 (vinyl alcohol) acetoacetyl ester, polymer with
 adipic acid, 3-methyl-1,5-pentanediol, IPDI, 2,2-
 bis(hydroxymethyl)propionic acid and diethylenetriamine
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
 (Properties); TEM (Technical or engineered material use); PREP

(Preparation); USES (Uses)

(water-thinned compns. with good miscibility and solvent and water resistance for coatings of ink-jet printing sheets)

IT 111-30-8, Glutaraldehyde 25212-19-5, WS 535

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(water-thinned compns. with good miscibility and solvent and water resistance for coatings of ink-jet printing sheets)

IT 9002-89-5D, Poly(vinyl alcohol

), amino-, acetoacetyl-, or ethylene-containing

RL: TEM (Technical or engineered material use); USES (Uses)

(water-thinned compns. with good miscibility and solvent and water resistance for coatings of ink-jet printing sheets)

L74 ANSWER 8 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:790140 HCAPLUS

DOCUMENT NUMBER: 133:339981

TITLE: Lotionized tissue products containing a pH balance compound for the skin

INVENTOR(S): Luu, Phuong V.; Oriaran, Philips T.; White, David W.; Awofeso, Anthony O.; Schroeder, Gary L.; Fredericks, Richard E.

PATENT ASSIGNEE(S): Fort James Corporation, USA

SOURCE: Eur. Pat. Appl., 7 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

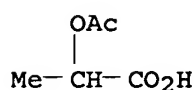
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1050297	A2	20001108	EP 2000-109038	20000427
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EP 1050297	A3	20001115		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 6352700	B1	20020305	US 1999-303660	19990503
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CA 2306594	A1	20001103	CA 2000-2306594	20000425
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PRIORITY APPLN. INFO.:			US 1999-303660	A 19990503

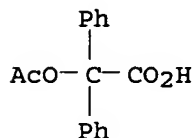
AB A substrate treated with a lotion including a skin pH balancing compound and a base lotion. The pH balancing compound is preferably an organic acid, such as an alpha-hydroxy acid, an alpha-dihydroxy acid, or a beta-hydroxy acid, a combination of an organic acid and a salt of an organic acid, or a buffer combination, such as combinations of citric acid and disodium phosphate, or disodium citrate and sodium hydroxide. The preferred lotion has the effect of maintaining the skin acid mantle while making the treated substrate, preferably

tissue, towel or napkin, optionally wet-strengthened, wipe or nonwoven material, feel smooth, lubricious and nongreasy. The skin care benefits of the lotionized substrate are expressed whether the product is used dry or prewetted with water. A lotion containing C12-15 alkyl benzoate (Finsolv TN) 35, cetearyl alc. (Crodacol CS 50) 63, and glycolic acid 2 % was formulated, and applied on one-ply tissue paper to obtain a lotionized tissue product.

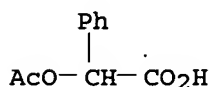
IT 535-17-1, Acetyl lactic acid 3808-00-2, O-Acetyl
benzilic acid 5438-68-6, O-Acetyl mandelic acid
13831-30-6, Acetyl glycolic acid
RL: BUU (Biological use, unclassified); BIOL (Biological study);
USES (Uses)
(lotionized products containing skin pH balancing compds.)
RN 535-17-1 HCAPLUS
CN Propanoic acid, 2-(acetyloxy)- (CA INDEX NAME)



RN 3808-00-2 HCAPLUS
CN Benzeneacetic acid, α -(acetyloxy)- α -phenyl- (CA INDEX NAME)



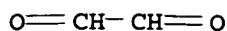
RN 5438-68-6 HCAPLUS
CN Benzeneacetic acid, α -(acetyloxy)- (CA INDEX NAME)



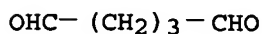
RN 13831-30-6 HCAPLUS
CN Acetic acid, 2-(acetyloxy)- (CA INDEX NAME)



IT 107-22-2, Glyoxal 111-30-8, Glutaraldehyde
9002-89-5, Polyvinyl alcohol
RL: BUU (Biological use, unclassified); BIOL (Biological study);
USES (Uses)
(lotionized web products containing skin pH balancing compds. and wet strength agents)
RN 107-22-2 HCAPLUS
CN Ethanedial (CA INDEX NAME)



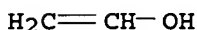
RN 111-30-8 HCAPLUS
CN Pentanedial (CA INDEX NAME)



RN 9002-89-5 HCAPLUS
CN Ethenol, homopolymer (CA INDEX NAME)

CM 1

CRN 557-75-5
CMF C2 H4 O



IC ICM A61K007-50
CC 62-4 (Essential Oils and Cosmetics)
Section cross-reference(s): 63
IT Polymers, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study);
USES (Uses)
(aldehyde-containing; lotionized web products containing skin
pH balancing compds. and wet strength agents)
IT Aminoplasts
Dialdehydes
RL: BUU (Biological use, unclassified); BIOL (Biological study);
USES (Uses)
(lotionized web products containing skin pH balancing compds. and wet
strength agents)
IT Alcohols, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study);
USES (Uses)
(polyhydric, aldehyde-containing; lotionized web products
containing skin pH balancing compds. and wet strength agents)
IT 50-21-5, Lactic acid, biological studies 69-72-7, Salicylic acid,
biological studies 76-93-7, Benzilic acid, biological studies
77-92-9, Citric acid, biological studies 79-14-1, Glycolic acid,
biological studies 87-69-4, Tartaric acid, biological studies
110-44-1, Sorbic acid 127-17-3, Pyruvic acid, biological studies
144-33-2, Disodium citrate 526-95-4, Gluconic acid
535-17-1, Acetyl lactic acid 594-61-6, α -Hydroxy
isobutyric acid 1310-73-2, Sodium hydroxide, biological studies
3808-00-2, O-Acetyl benzilic acid 5438-68-6,
O-Acetyl mandelic acid 6915-15-7, Malic acid 7558-79-4, Disodium
phosphate 13831-30-6, Acetyl glycolic acid 68936-95-8,
Glucate SS 72175-39-4, Glucamate SSE-20 74565-11-0, Finsolv TN
RL: BUU (Biological use, unclassified); BIOL (Biological study);
USES (Uses)
(lotionized products containing skin pH balancing compds.)
IT 57-13-6D, Urea, derivs., biological studies 106-89-8D,
Epichlorohydrin, polyamides 107-22-2, Glyoxal
111-30-8, Glutaraldehyde 9002-89-5,
Polyvinyl alcohol 9002-98-6 9003-05-8D,

Polyacrylamide, glyoxalated 9003-08-1 9005-25-8D, Starch, derivs., aldehyde-containing cationic starch, biological studies 9011-05-6, Formaldehyde-urea copolymer
 RL: BUU (Biological use, unclassified); BIOL (Biological study);
 USES (Uses)

(lotionized web products containing skin pH balancing compds. and wet strength agents)

L74 ANSWER 9 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:608924 HCAPLUS
 DOCUMENT NUMBER: 133:203820
 TITLE: Intravascular delivery of non-viral nucleic acid
 INVENTOR(S): Wolff, Jon A.; Monahan, Sean D.; Hagstrom, James E.; Slattum, Paul M.; Budker, Vladimir G.; Rozema, David B.
 PATENT ASSIGNEE(S): Mirus Corp., USA
 SOURCE: PCT Int. Appl., 38 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 49
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000050617	A1	20000831	WO 2000-US4521	20000222

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W: JP
 RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
 EP 1161547 A1 20011212 EP 2000-911912 20000222

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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI
 PRIORITY APPLN. INFO.: US 1999-121730P P 19990226

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US 1999-146564P P 19990730

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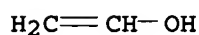
WO 2000-US4521 W 20000222

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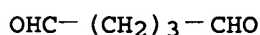
AB Disclosed is a process for transfecting genetic material into a mammalian cell to alter endogenous properties of the cell. The process comprises designing a polynucleotide for transfection. Then the polynucleotide is inserted into a mammalian vessel such as a tail vein or artery. Prior to insertion, subsequent to insertion, or concurrent with insertion the permeability of the vessel is increased thereby the genetic material is delivered to the parenchymal cell altering endogenous properties of the cell. The naked polynucleotide is complexed prior to delivery with amphipathic

comps., polymers, or other nonviral vectors. Syntheses are described for the preparation of several activated disulfide-containing co-monomers and of pH-cleavable polymers for intracellular compartment release.

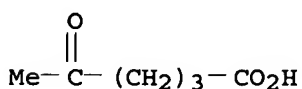
IT 9002-89-5DP, Polyvinyl alcohol, reaction products with 5-oxohexanoic acid
 RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (chemical synthesis of polymers for DNA complexation; intravascular delivery of non-viral nucleic acid)
 RN 9002-89-5 HCAPLUS
 CN Ethenol, homopolymer (CA INDEX NAME)
 CM 1
 CRN 557-75-5
 CMF C2 H4 O



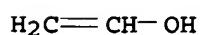
IT 111-30-8, Pentanedial 3128-06-1, 4-Acetylbutyric acid 9002-89-5, Polyvinyl alcohol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (chemical synthesis of polymers for DNA complexation; intravascular delivery of non-viral nucleic acid)
 RN 111-30-8 HCAPLUS
 CN Pentanedial (CA INDEX NAME)



RN 3128-06-1 HCAPLUS
 CN Hexanoic acid, 5-oxo- (CA INDEX NAME)



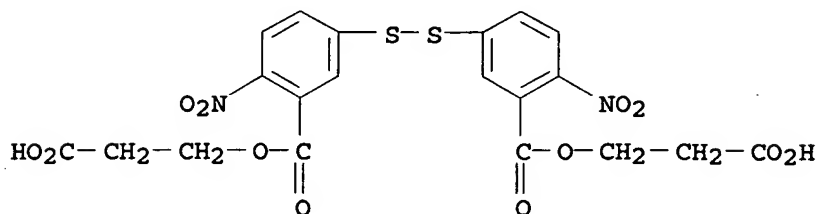
RN 9002-89-5 HCAPLUS
 CN Ethenol, homopolymer (CA INDEX NAME)
 CM 1
 CRN 557-75-5
 CMF C2 H4 O



IT 289888-04-6P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (chemical synthesis of polymers for DNA complexation; intravascular

delivery of non-viral nucleic acid)

RN 289888-04-6 HCAPLUS
 CN Benzoic acid, 3,3'-dithiobis[6-nitro-, bis(2-carboxyethyl) ester
 (9CI) (CA INDEX NAME)



IC ICM C12N015-85
 ICS A61K009-127; A61K048-00; C07H021-04
 CC 3-2 (Biochemical Genetics)
 Section cross-reference(s): 35
 IT 9002-89-5DP, Polyvinyl alcohol, reaction
 products with 5-oxohexanoic acid 25104-18-1DP, Poly(L-lysine),
 reaction products with citraconic anhydride or dimethylmaleic
 anhydride 25619-78-7DP, Poly(L-tyrosine), reaction products with
 citraconic anhydride 25667-16-7DP, reaction products with
 citraconic anhydride 26742-84-7DP, Poly(vinyl phenyl
 ketone), reaction products with glycerol or with glycerol
 and succinic anhydride 38000-06-5DP, Poly(L-lysine), reaction
 products with citraconic anhydride or dimethylmaleic anhydride
 59269-51-1DP, Polyvinylphenol, reaction products with citraconic
 anhydride 209517-47-5P 289888-07-9P 289888-08-0P
 289888-09-1P 289888-10-4P 289888-11-5P 289888-12-6P
 289888-14-8P 289888-15-9P 289888-17-1P 289888-18-2P
 RL: BUU (Biological use, unclassified); SPN (Synthetic preparation);
 THU (Therapeutic use); BIOL (Biological study); PREP (Preparation);
 USES (Uses)
 (chemical synthesis of polymers for DNA complexation; intravascular
 delivery of non-viral nucleic acid)
 IT 56-81-5, 1,2,3-Propanetriol, reactions 56-89-3, L-Cystine,
 reactions 69-78-3, 5,5'-Dithiobis(2-nitrobenzoic acid) 105-83-9
 109-78-4, 3-Hydroxypropionitrile 111-30-8, Pentanedial
 112-57-2, Tetraethylenepentamine 616-02-4, Citraconic anhydride
 766-39-2, 2,3-Dimethylmaleic anhydride 3128-06-1,
 4-Acetylbutyric acid 4067-16-7, Pentaethylenehexamine 4097-89-6,
 Tris(2-aminoethyl)amine 4741-99-5, N,N'-Bis(2-aminoethyl)-1,3-
 propanediamine 6066-82-6, N-Hydroxysuccinimide 7209-38-3,
 1,4-Bis(3-aminopropyl)piperazine 9002-89-5,
 Polyvinyl alcohol 10389-65-8 13551-09-2
 25104-18-1, Poly(L-lysine 25619-78-7, Poly(L-tyrosine).
 25667-16-7 26742-84-7, Poly(vinyl phenyl ketone)
 38000-06-5, Poly(L-lysine) 52328-05-9, O-Methylisourea hydrogen
 sulfate 58632-95-4, 2-tert-Butoxycarbonyloxymino)-2-
 phenylacetonitrile 59269-51-1, Polyvinylphenol 289888-16-0
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (chemical synthesis of polymers for DNA complexation; intravascular
 delivery of non-viral nucleic acid)
 IT 60129-38-6P 109970-44-7P 210292-23-2P 289888-04-6P
 289888-06-8P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
 RACT (Reactant or reagent)

(chemical synthesis of polymers for DNA complexation; intravascular delivery of non-viral nucleic acid)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L74 ANSWER 10 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:183812 HCAPLUS

DOCUMENT NUMBER: 130:259561

TITLE: Heat-sensitive recording material for overhead projector

INVENTOR(S): Oga, Kunihiro

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 11070736	A	19990316	JP 1997-234405	199708 29

PRIORITY APPLN. INFO.:

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JP 1997-234405

199708
29

AB The heat-sensitive recording material has a heat-sensitive layer and a protective layer on a support, wherein the heat-sensitive layer contains acetoacetylated polyvinyl alc. and the protective layer contains a layer-hardening agent chosen from diol or aldehyde. The recording material provides the excellent light-passing image concentration without detracting printing characteristics and the moisture-resistance of the printed image.

IT 39290-68-1

RL: TEM (Technical or engineered material use); USES (Uses)
(Z 100, Z 200, Z 210; heat-sensitive recording material)

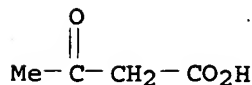
RN 39290-68-1 HCAPLUS

CN Ethanol, homopolymer, 3-oxobutanoate (CA INDEX NAME)

CM 1

CRN 541-50-4

CMF C4 H6 O3



CM 2

CRN 9002-89-5

CMF (C2 H4 O)x

CCI PMS

CM 3

CRN 557-75-5

CMF C2 H4 O

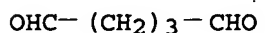


IT 111-30-8, Glutaraldehyde

RL: TEM (Technical or engineered material use); USES (Uses)
(layer-hardening agent for heat-sensitive recording material)

RN 111-30-8 HCAPLUS

CN Pentanedial (CA INDEX NAME)



IC ICM B41M005-26

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)ST heat sensitive recording material overhead projector; layer
hardening agent polyvinyl alc

IT 39290-68-1

RL: TEM (Technical or engineered material use); USES (Uses)
(Z 100, Z 200, Z 210; heat-sensitive recording material)

IT 111-30-8, Glutaraldehyde 32909-97-0

RL: TEM (Technical or engineered material use); USES (Uses)
(layer-hardening agent for heat-sensitive recording material)

L74 ANSWER 11 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1996:110077 HCAPLUS

DOCUMENT NUMBER: 124:249168

ORIGINAL REFERENCE NO.: 124:45807a,45810a

TITLE: Fiber-optic sensor with a dye-modified chitosan/
poly(vinyl alcohol)AUTHOR(S): cladding for the determination of organic acids
Kurauchi, Yoshiaki; Ogata, Tohru; Egashira,
Naoyoshi; Ohga, KazuyaCORPORATE SOURCE: Dep. of Applied Chemistry, Oita Univ., Oita,
870-11, JapanSOURCE: Analytical Sciences (1996), 12(1),
55-9

CODEN: ANSCEN; ISSN: 0910-6340

PUBLISHER: Japan Society for Analytical Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Organic acids in aqueous solution were determined with a fiber-optic sensor
having

a chitosan/poly(vinyl alc.) cladding.

Interference from ethanol could be reduced by controlling the
crosslinking of the cladding with glutaraldehyde and by
modifying the cladding with 5',5''-dibromopyrogallolsulfonphthalein.
The response time for 5 volume/volume% acetic acid was within 1 min and
the relative standard deviation was .apprx.2% for 10 successive
measurements. Coating of the cladding with an amorphous
fluoropolymer increased its durability and removed interferences

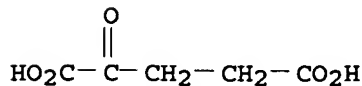
from inorg. acids and nonvolatile compds.

IT 328-50-7

RL: ANT (Analyte); ANST (Analytical study)
(fiber-optic sensor with dye-modified chitosan/poly(vinyl alc.) cladding for determination of organic acids)

RN 328-50-7 HCAPLUS

CN Pentanedioic acid, 2-oxo- (CA INDEX NAME)



IT 9002-89-5, Poly(vinyl alcohol)

RL: ARU (Analytical role, unclassified); DEV (Device component use);
ANST (Analytical study); USES (Uses)
(fiber-optic sensor with dye-modified chitosan/poly(vinyl alc.) cladding for determination of organic acids)

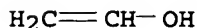
RN 9002-89-5 HCAPLUS

CN Ethenol, homopolymer (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C2 H4 O

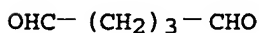


IT 111-30-8, Glutaraldehyde

RL: ARU (Analytical role, unclassified); DEV (Device component use);
ANST (Analytical study); USES (Uses)
(for preparation of fiber-optic sensor with dye-modified chitosan/poly(vinyl alc.) cladding for determination of organic acids)

RN 111-30-8 HCAPLUS

CN Pentanedial (CA INDEX NAME)



CC 80-2 (Organic Analytical Chemistry)

IT Carboxylic acids, analysis

RL: ANT (Analyte); ANST (Analytical study)
(fiber-optic sensor with dye-modified chitosan/poly(vinyl alc.) cladding for determination of organic acids)

IT Sensors

(fiber-optic, fiber-optic sensor with dye-modified chitosan/poly(vinyl alc.) cladding for determination of organic acids)

IT 64-19-7, Acetic acid, analysis 65-85-0, Benzoic acid, analysis
77-92-9, Citric acid, analysis 79-14-1, HydroxyAcetic acid, analysis
88-99-3, Phthalic acid, analysis 103-82-2, Phenylacetic acid, analysis
144-62-7, Oxalic acid, analysis 298-12-4
328-50-7 528-44-9, 1,2,4-Benzenetricarboxylic acid
759-05-7 1113-60-6
RL: ANT (Analyte); ANST (Analytical study)

(fiber-optic sensor with dye-modified chitosan/poly(vinyl alc.) cladding for determination of organic acids).

IT 9002-89-5, Poly(vinyl alcohol)
9012-76-4, Chitosan
RL: ARU (Analytical role, unclassified); DEV (Device component use);
ANST (Analytical study); USES (Uses)
(fiber-optic sensor with dye-modified chitosan/poly(vinyl alc.) cladding for determination of organic acids)

IT 111-30-8, Glutaraldehyde
RL: ARU (Analytical role, unclassified); DEV (Device component use);
ANST (Analytical study); USES (Uses)
(for preparation of fiber-optic sensor with dye-modified chitosan/poly(vinyl alc.) cladding for determination of organic acids)

IT 115-41-3, Pyrocatechol violet 149-45-1, Tiron 5182-30-9, Sodium
1,3,6-naphthalenetrisulfonate 16574-43-9 27928-00-3,
8-Hydroxy-1,3,6-pyrenetrisulfonic acid 37626-13-4, Teflon af
84100-31-2
RL: ARU (Analytical role, unclassified); DEV (Device component use);
ANST (Analytical study); USES (Uses)
(in fiber-optic sensor with dye-modified chitosan/poly(vinyl alc.) cladding for determination of organic acids)

L74 ANSWER 12 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1995:938552 HCAPLUS

DOCUMENT NUMBER: 123:325834

ORIGINAL REFERENCE NO.: 123:58183a,58186a

TITLE: Thermal recording material with acetoacetylated
poly(vinyl alcohol)
protective layer

INVENTOR(S): Mando, Ritsuo

PATENT ASSIGNEE(S): Shinoji Seishi Kk, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07232477	A	19950905	JP 1994-28232	19940225

PRIORITY APPLN. INFO.:

JP 1994-28232

19940225

AB The recording material consists of a substrate successively coated with a thermal recording layer and a protective layer containing a pigment, Al(OH)₃, and acetoacetylated poly(vinyl alc.) which is obtained by applying a resin solution of pH 5-8 and drying. The recording layer may contain an aldehyde for good water resistance. The material is useful for labels in point-of-sales system.

IT 39290-68-1, Gohsefimer Z 200

RL: DEV (Device component use); USES (Uses)

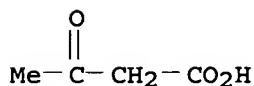
(thermal recording material with acetoacetylated poly(

vinyl alc.) protective layer containing Al
hydroxide)

RN 39290-68-1 HCAPLUS
CN Ethenol, homopolymer, 3-oxobutanoate (CA INDEX NAME)

CM 1

CRN 541-50-4
CMF C4 H6 O3



CM 2

CRN 9002-89-5
CMF (C2 H4 O)x
CCI PMS

CM 3

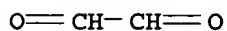
CRN 557-75-5
CMF C2 H4 O



IT 107-22-2, Glyoxal
RL: DEV (Device component use); MOA (Modifier or additive use); USES
(Uses)

(thermal recording material with acetoacetylated poly(
vinyl alc.) protective layer containing Al
hydroxide)

RN 107-22-2 HCAPLUS
CN Ethanedial (CA INDEX NAME)



IC ICM B41M005-26
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)

ST thermal recording material protective resin; water resistance
aldehyde thermal recording; acetoacetylated
polyvinyl alc thermal recording

IT Printing, nonimpact
(thermal, thermal recording material with acetoacetylated
poly(vinyl alc.) protective layer
containing Al hydroxide)

IT 21645-51-2, Aluminum hydroxide, uses 39290-68-1,
Gohsefimer Z 200

RL: DEV (Device component use); USES (Uses)
(thermal recording material with acetoacetylated poly(
vinyl alc.) protective layer containing Al

hydroxide)
 IT 107-22-2, Glyoxal
 RL: DEV (Device component use); MOA (Modifier or additive use); USES
 (Uses)
 (thermal recording material with acetoacetylated poly(
 vinyl alc.) protective layer containing Al
 hydroxide)

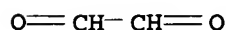
L74 ANSWER 13 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1995:261475 HCAPLUS
 DOCUMENT NUMBER: 122:292769
 ORIGINAL REFERENCE NO.: 122:53367a,53370a
 TITLE: Two-component water-resistant fast-curing
 adhesives
 INVENTOR(S): Shima, Shuji; Kuwako, Nobuteru.
 PATENT ASSIGNEE(S): Koyo Sangyo Co, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 06256748	A	19940913	JP 1993-72887	199303 09

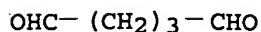
PRIORITY APPLN. INFO.: JP 1993-72887
 199303
 09

AB The title adhesives, useful for bonding wood, inorg. materials,
 paper, etc., comprise a component containing isocyanates and aqueous
 acetoacetyl group-containing polymer solns. and/or emulsions and a
 component containing aqueous solns. or dispersions containing hydrazines,
 aldehydes, and/or polyethylenimine as well as glycidylamino
 group-containing epoxy resins. Applying a solution containing Gohsefimer Z
 200, butadiene-styrene copolymer latex, CaCO₃, and
 diisocyanatodiphenylmethane on a wood surface, applying a solution
 containing carbodihydrazide, TETRD X, isooctyl acetate, and a lubricant
 on another wood surface, and pressing the coated surfaces together
 for 72 h gave shear strength 200 kg/cm² initially and 85 kg/cm²
 after contact with boiling H₂O.

IT 107-22-2, Glyoxal 111-30-8, Glutaraldehyde
 39290-68-1, Poly(vinyl alcohol
) acetoacetate
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical
 or engineered material use); USES (Uses)
 (in two-component water-resistant adhesives containing glycidylamine
 resin)
 RN 107-22-2 HCAPLUS
 CN Ethanediol (CA INDEX NAME)



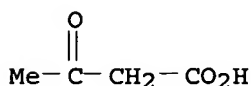
RN 111-30-8 HCAPLUS
 CN Pentanedial (CA INDEX NAME)



RN 39290-68-1 HCAPLUS
 CN Ethenol, homopolymer, 3-oxobutanoate (CA INDEX NAME)

CM 1

CRN 541-50-4
 CMF C4 H6 O3

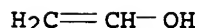


CM 2

CRN 9002-89-5
 CMF (C2 H4 O)x
 CCI PMS

CM 3

CRN 557-75-5
 CMF C2 H4 O



IC ICM C09J175-04
 ICS C09J175-04
 ICA C08G018-58; C08G018-83
 CC 38-3 (Plastics Fabrication and Uses)
 IT 101-68-8 107-22-2, Glyoxal 111-30-8,
 Glutaraldehyde 497-18-7, Carbodihydrazide 1071-93-8,
 Adipic dihydrazide 9002-98-6, Polyethylenimine 39290-68-1
 , Poly(vinyl alcohol) acetoacetate
 163206-51-7, AD 100H 163206-52-8, AD 100R
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical
 or engineered material use); USES (Uses)
 (in two-component water-resistant adhesives containing glycidylamine
 resin)

L74 ANSWER 14 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1993:23861 HCAPLUS
 DOCUMENT NUMBER: 118:23861
 ORIGINAL REFERENCE NO.: 118:4443a,4446a
 TITLE: Anticorrosive dampening water compositions for
 lithographic printing apparatus
 INVENTOR(S): Matsumoto, Hiroshi; Kunichika, Kenji; Uchida,
 Toshio
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Can. Pat. Appl., 31 pp.
CODEN: CPXXEB
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CA 2053554	A1	19920426	CA 1991-2053554	199110 16
US 5165344	A	19921124	US 1991-780202	199110 22
PRIORITY APPLN. INFO.:				199010 25

OTHER SOURCE(S): MARPAT 118:23861

AB Title comps. contain hydrophilic film-forming polymers, pH buffers, and benzimidazole derivs. Thus, an aqueous composition containing gum arabic 0.015, Mg(NO₃)₂ 0.3, H₃PO₄ 0.13, monoammonium citrate 0.13, benzimidazole 0.003, and iso-PrOH 10% was adjusted with KOH to pH 5.0-5.5 and showed good anticorrosion on Cu, brass, steel, and (ni-plated) cast iron. Lithog. printing with the use of the composition as dampening water gave a ≥104 smudge-resistant copies and no contamination to the metering rolls.

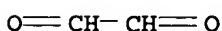
IT 107-22-2D, Ethanedia, reaction products with cellulose derivs. 9002-89-5, Poly(vinyl alcohol)

RL: USES (Uses)

(dampening water comps., benzimidazole derivative-containing, anticorrosion, for lithog. plates)

RN 107-22-2 HCAPLUS

CN Ethanedia (CA INDEX NAME)



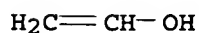
RN 9002-89-5 HCAPLUS

CN Ethenol, homopolymer (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C2 H4 O

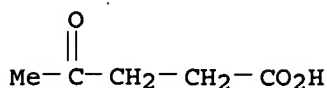


IT 123-76-2, Levulinic acid

RL: USES (Uses)

(pH buffering agent, dampening water comps. containing, with benzimidazoles, anticorrosive, for lithog. plates)

RN 123-76-2 HCAPLUS
 CN Pentanoic acid, 4-oxo- (CA INDEX NAME)



IC ICM C23F011-14
 ICS B41N003-08
 CC 42-10 (Coatings, Inks, and Related Products)
 IT 50-00-0, **Formaldehyde**, uses 51-17-2, Benzimidazole
 91-22-5, Quinoline, uses 95-14-7, 1H-Benzotriazole 110-86-1,
 Pyridine, uses 113-00-8, Guanidine 288-32-4, Imidazole, uses
 288-42-6, Oxazole 583-39-1, 2-Mercaptobenzimidazole 1003-07-2,
 4-Isotiazolin-3-one 4418-26-2, Sodium dehydroacetate
 11084-05-2, Oxazine 37052-78-1, 5-Methoxy-2-mercaptobenzimidazole
 37306-44-8, Triazole 53918-03-9, Sodium 2-mercaptobenzimidazole-5-
 sulfonate
 RL: USES (Uses)
 (dampening water compns. containing, anticorrosive, for lithog.
 plates)
 IT 107-22-2D, Ethanedial, reaction products with cellulose
 derivs. 9000-01-5, Gum arabic 9002-89-5, Poly(
vinyl alcohol) 9003-01-4, Poly(acrylic acid)
 9003-05-8, Polyacrylamide 9003-39-8, Poly(vinyl pyrrolidone)
 9004-32-4 9004-34-6D, Cellulose, derivs., reaction products with
 glyoxal 9004-42-6, Carboxyethyl cellulose 9004-53-9, Dextrin
 9004-62-0, Hydroxyethyl cellulose 9004-64-2, Hydroxypropyl
 cellulose 9004-65-3 9004-67-5, Methyl cellulose 9005-25-8D,
 Starch, carboxymethylated or phosphated or octenylsuccinylated
 9005-32-7D, Alginic acid, salt 9011-07-8, Maleic anhydride-vinyl
 acetate copolymer 9011-16-9, Maleic anhydridemethyl vinyl ether
 copolymer 25322-68-3 50851-57-5, Poly(styrenesulfonic acid)
 RL: USES (Uses)
 (dampening water compns., benzimidazole derivative-containing,
 anticorrosion, for lithog. plates)
 IT 121-57-3, Sulfanilic acid 123-76-2, Levulinic acid
 141-82-2, Propanedioic acid, miscellaneous 144-62-7, Oxalic acid,
 miscellaneous 526-95-4, Gluconic acid 4450-94-6, Monoammonium
 citrate 6915-15-7, Malic acid 7664-38-2, Phosphoric acid,
 miscellaneous 7664-93-9, Sulfuric acid, miscellaneous 7697-37-2,
 Nitric acid, miscellaneous 10343-62-1, Metaphosphoric acid
 10377-60-3, Magnesium nitrate 13598-36-2D, Phosphonic acid, organic
 derivs. 14798-03-9D, Ammonium, salts
 RL: USES (Uses)
 (pH buffering agent, dampening water compns. containing, with
 benzimidazoles, anticorrosive, for lithog. plates)

L74 ANSWER 15 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1992:422477 HCAPLUS
 DOCUMENT NUMBER: 117:22477
 ORIGINAL REFERENCE NO.: 117:3981a,3984a
 TITLE: Immobilization of biocatalysts using crosslinked
 acetoacetyl poly(vinyl
alcohol) hydrogels
 AUTHOR(S): Kondo, Masao; Mannen, Takeo; Shimokawa, Wataru;
 Fukumori, Katsuaki
 CORPORATE SOURCE: Food Res. Inst., Aichi Prefect. Gov., Nagoya,

SOURCE: 451, Japan
Hakko Kogaku Kaishi (1991), 69(5),
337-44
CODEN: HKOKDE; ISSN: 0385-6151

DOCUMENT TYPE: Journal

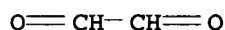
LANGUAGE: Japanese

AB Acetoacetyl polyvinyl alc. solution formed
crosslinked hydrogels in various gelating times at appropriate pH,
when it was treated with bifunctional gelating agents such as
aldehyde and hydrazide. The appearance of the hydrogels was
similar to calcium alginate gels, and they were stable under
conditions which cause decomposition of the latter. The hydrogels were
useful as immobilization supports for microorganisms and enzymes.
The present paper is concerned with the gelating condition of
acetoacetyl polyvinyl alc. and the
immobilization method using the gels. Acetobacter aceti cells and
alc. dehydrogenase were tested as immobilized biocatalysts.

IT 107-22-2, Glyoxal 111-30-8, Pentanedial
RL: USES (Uses)
(acetoacetyl poly(vinyl alc.)
crosslinked hydrogels formation by)

RN 107-22-2 HCAPLUS

CN Ethanedial (CA INDEX NAME)



RN 111-30-8 HCAPLUS

CN Pentanedial (CA INDEX NAME)



IT 39290-68-1
RL: USES (Uses)
(crosslinked hydrogels, enzymes and microorganisms immobilization
on and stability of)

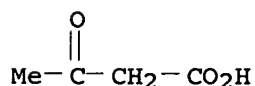
RN 39290-68-1 HCAPLUS

CN Ethenol, homopolymer, 3-oxobutanoate (CA INDEX NAME)

CM 1

CRN 541-50-4

CMF C4 H6 O3



CM 2

CRN 9002-89-5

CMF (C2 H4 O)x

CCI PMS

CM 3

CRN 557-75-5

CMF C2 H4 O



- CC 7-7 (Enzymes)
Section cross-reference(s): 9, 16
- ST immobilization biocatalyst acetoacetyl poly vinyl alc; microorganism immobilization acetoacetyl poly vinyl alc; Acetobacter immobilization acetoacetyl poly vinyl alc; immobilized enzyme acetoacetyl poly vinyl alc
- IT Acetobacter aceti
Microorganism
(immobilization of, on acetoacetyl poly(vinyl alc.) crosslinked hydrogels)
- IT Fermentation
(of acetate, Acetobacter aceti immobilized cells and acetoacetyl poly(vinyl alc.) crosslinked hydrogel for)
- IT Immobilization, biochemical
(of enzymes and microorganisms, on acetoacetyl poly(vinyl alc.) crosslinked hydrogels)
- IT Enzymes
RL: USES (Uses)
(immobilized, on acetoacetyl poly(vinyl alc.) crosslinked hydrogels)
- IT 107-22-2, Glyoxal 111-30-8, Pentanedial 497-18-7, Carbohydrazide 1071-93-8 9047-50-1, Dialdehyde starch
RL: USES (Uses)
(acetoacetyl poly(vinyl alc.) crosslinked hydrogels formation by)
- IT 39290-68-1
RL: USES (Uses)
(crosslinked hydrogels, enzymes and microorganisms immobilization on and stability of)
- IT 64-19-7, Acetic acid, biological studies
RL: BIOL (Biological study)
(fermentation of, Acetobacter aceti immobilized cells and acetoacetyl poly(vinyl alc.) crosslinked hydrogels for)
- IT 9031-72-5, Alcohol dehydrogenase
RL: PROC (Process)
(immobilization of, on acetoacetyl poly(vinyl alc.) crosslinked hydrogels)

L74 ANSWER 16 OF 16 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1952:14649 HCAPLUS
 DOCUMENT NUMBER: 46:14649
 ORIGINAL REFERENCE NO.: 46:2572d-i,2573a
 TITLE: Polyvinyl alcohol
 -1-butene-1,3-dione reaction products
 INVENTOR(S): Jones, Giffin D.
 PATENT ASSIGNEE(S): General Aniline & Film Corp.
 DOCUMENT TYPE: Patent

LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2536980		19510102	US 1947-745648	19470502

AB Partial or complete esterification of the OH groups of polyvinyl alc. (I) with a β -keto acid is effected by heating a mixture of I and a diketene of the general type $RCH_2C(:O)CR':C:O$, where R and R' are alkyl, in a suitable inert solvent, such as formamide, N-alkyl- and dialkylformamides, $AcNH_2$, γ -butyrolactam, caprolactam, 2-morpholine, etc., at 100-50°. Partially or completely hydrolyzed polyvinyl esters are suitable as I. Thus to I (100% hydrolyzed and having a viscosity as a 4% aqueous solution of 24 centipoises at 20°) 300 in anhydrous $HCONMe_2$ (II) 2700 is added slowly with stirring during 1.5 hrs. $AcCH:C:O$ 108 in II 2700 at 120°, and the hot solution poured into MeOH 6400 to precipitate a partial acetoacetic ester of I (III) with 18.9% of the OH groups acylated 335 parts. Similarly are prepared the partial acetoacetic esters (IV) of I having the following percentages of OH groups esterified: 10 (V) from I (4% aqueous solution, 24 centipoises at 20°); 16.2 (VI) and 7.6 (VII) from I (4% aqueous solution, 25 centipoises at 20°); 6.8 (VIII) from I (4% aqueous solution, 51 centipoises at 20°); 10.8 (IX) from 87% hydrolyzed polyvinyl acetate (4% aqueous solution, 22 centipoises at 20°). The IV having 4.5-10% of the OH groups esterified, obtained from water-soluble I having viscosities of 15-30 centipoises at 20° are capable of forming thermoreversible gels when heated with a gelling agent such as adipohydrazide (X), and are useful as gelatin substitutes in photographic emulsions. Directions for the preparation of a photographic emulsion (XI) containing III and X are given. Paper coated with XI gives in standard photographic procedures prints having clear highlight portions, good gradation, and deep black in the shadow portions, with speeds equal or slightly higher than standard paper; the finished prints are not attacked by boiling 5 min. in H_2O . Addition of 2% X solution 1 to 5% aqueous IV solns. 25 g. causes gelation of the clear viscous solution. The variation of the m. and gelling points depends on the pH (adjusted with 25% aqueous citric acid) and is listed in the following for some IV at various pH in the order: pH, m.p., gelling point: V 2.5, 50°, 35°; 3.0, 55°, 45°; 4.0, 65°, 48°; 5.0, 70°, 46°; 6.0, 74°, 55°; VIII 2.5, 43°, 36°; 3.0, 51°, 44°; 4.0, 57°, 46°; 5.0, above 80°, -; VII 2.5, 46°, 25°; 3.0, 58°, 45°; 4.0, 66°, 58°; 5.0, above 75°, -; IX 2.5, 55°, 40°; 3.0, 58°, 47°; 4.0, 64°, 52°; 5.0, 71°, 55°; 6.0, 76°, 55°. The IV are also useful as nondiffusing color coupling components in certain color photographic processes. IV with higher acyl contents, such as VI, are valuable creaseproofing agents for textiles. The IV with a relatively high acyl content can be cast and molded and possess phys. properties similar to those of polyvinyl acetate.

IT 111-30-8, Glutaraldehyde

(and derivs.)

RN 111-30-8 HCAPLUS
 CN Pentanedial (CA INDEX NAME)

$$\text{OHC}-(\text{CH}_2)_3-\text{CHO}$$

IT 9002-89-5, Vinyl alcohol, homopolymer
 (and their esters, reaction products with 1-butene-1,3-dione and
 related compds.)

RN 9002-89-5 HCAPLUS
 CN Ethenol, homopolymer (CA INDEX NAME)

CM 1

CRN 557-75-5
 CMF C2 H4 O

$$\text{H}_2\text{C}=\text{CH}-\text{OH}$$

IT 1071-46-1P, Malonic acid, ethyl ester
 RL: PREP (Preparation)
 (preparation of)
 RN 1071-46-1 HCAPLUS
 CN Propanedioic acid, 1-ethyl ester (CA INDEX NAME)

$$\begin{array}{c} \text{O} \\ || \\ \text{EtO}-\text{C}-\text{CH}_2-\text{CO}_2\text{H} \end{array}$$

CC 10 (Organic Chemistry)
 IT Gelatin substitutes
 (acetoacetic acid and related compound esters with
 polyvinyl alc.)
 IT Textiles
 (creaseproofing of, polyvinyl alcs. acylated
 with 1-butene-1,3-diones for)
 IT Aldehydes
 (di-)
 IT Acetoacetic acid, esters with polyvinyl alc.
 RL: PREP (Preparation)
 IT 111-30-8, Glutaraldehyde
 (and derivs.)
 IT 691-45-2, 1-Butene-1,3-dione
 (and related compds., reaction products with polyvinyl
 alc. and its esters)
 IT 9002-89-5, Vinyl alcohol, homopolymer
 (and their esters, reaction products with 1-butene-1,3-dione and
 related compds.)
 IT 1071-46-1P, Malonic acid, ethyl ester
 RL: PREP (Preparation)
 (preparation of)

=>

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FILE COVERS 1907 - 14 Jul 2008 VOL 149 ISS 3
FILE LAST UPDATED: 13 Jul 2008 (20080713/ED)

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=> d his nofile 179-

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D L78 IBIB ABS HITSTR HITIND 1-6

D COST

L79 44 SEA ABB=ON PLU=ON L63(3A)L69
L80 8 SEA ABB=ON PLU=ON L79 AND (L38 OR L39)
L81 8 SEA ABB=ON PLU=ON L80 NOT (L71 OR L72 OR L73 OR L74 OR
L75 OR L76 OR L77 OR L78)

FILE 'HCAPLUS' ENTERED AT 16:58:09 ON 14 JUL 2008

=> d l81 ibib abs hitstr hitind 1-8

L81 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:513287 HCAPLUS

DOCUMENT NUMBER: 144:498431

TITLE: Manufacture of crosslinked polyvinyl acetal films, sheet polarizers comprising same films, and liquid crystal displays (LCDs) equipped with same polarizers

INVENTOR(S): Masuko, Yoshihiro; Shimizu, Mikio; Takei, Atsushi; Tokunaga, Hisatsugu

PATENT ASSIGNEE(S): Denki Kagaku Kogyo Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2006137078

A

20060601

JP 2004-328395

200411
12

PRIORITY APPLN. INFO.:

JP 2004-328395

200411
12

AB The crosslinked polyvinyl acetal films are manufactured by casting of organic solvent dopes containing polyvinyl acetals and crosslinking agents, wherein crosslinking is carried out until the crosslinking degree of 1-60% in a step of vaporization of the solvents in the dopes, and/or after a step of casting into films. Preferably, the crosslinking agents are selected from boric acids, boron compds. generating boric esters upon reaction with OH groups, silicon compds. generating siloxy groups upon reaction with OH groups, and blocked isocyanates. Also claimed are sheet polarizers comprising same films as protective films, and LCDs. The films show high adhesion to the polarizing films.

IT 9002-89-5DP, Poly(vinyl alcohol), cyclic acetals with acetoaldehyde, reaction products with boric acid
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (films; manufacture of crosslinked polyvinyl acetal films for protection of sheet polarizers for LCDs)

RN 9002-89-5 HCAPLUS

CN Ethenol, homopolymer (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C2 H4 O

$$\text{H}_2\text{C}=\text{CH}-\text{OH}$$

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 Section cross-reference(s): 38, 73

IT 75-07-0DP, Acetaldehyde, cyclic acetals with poly(vinyl alc.), reaction products with boric acid
 78-10-4DP, Tetraethoxysilane, reaction products with poly(vinyl alc.) cyclic acetoacetals 150-46-9DP,
 Triethoxyborane, reaction products with poly(vinyl alc.) cyclic acetoacetals 9002-89-5DP,
 Poly(vinyl alcohol), cyclic acetals with acetoaldehyde, reaction products with boric acid 10043-35-3DP,
 Boric acid, reaction products with poly(vinyl alc.) cyclic acetoacetals 118367-90-1DP, Takenate B 846N,
 reaction products with poly(vinyl alc.) cyclic acetoacetals
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (films; manufacture of crosslinked polyvinyl acetal films for protection of sheet polarizers for LCDs)

L81 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2001:847497 HCAPLUS
 DOCUMENT NUMBER: 135:379895
 TITLE: Lithographic formation of electrically
 conductive metal minute pattern on substrate
 INVENTOR(S): Kato, Hideto; Furihata, Tomoyoshi; Ueda, Takashi
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001323393	A	20011122	JP 2000-143033	200005 16
PRIORITY APPLN. INFO.: JP 2000-143033				200005 16

AB The formation involves (1) forming first resist pattern capable of supplying an acid on a substrate, (2) forming second resist layer which does not dissolve the first resist pattern and becomes insol. or slightly soluble to water or an aqueous alc. solution, (3) heating or exposing with light of an interlayer of the two resists to form the water- or alc.-insol. or -slightly soluble region of the second resist, (4) developing the second resist with water or the aqueous alc. solution to form a bilayered resists, and (5) electro- or electroless plating an elec. conductive metal to form a conductor pattern. The method enables down-sizing holes and spaces of the patterned resist to give the metal pattern of <0.4 μm space.

IT 9002-89-5, Polyvinyl alcohol
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (second resist component; lithog. formation of elec. conductive metal minute pattern on substrate by using bilayered resists)

RN 9002-89-5 HCAPLUS

CN Ethenol, homopolymer (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C2 H4 O

H₂C=CH-OH

IC ICM C25D005-02

ICS C23C018-31; C25D007-00; G11B005-31

CC 76-14 (Electric Phenomena)

Section cross-reference(s): 74

IT 140-95-4

RL: MOA (Modifier or additive use); USES (Uses)

(crosslinking agent for polyvinyl

acetals in second resist; lithog. formation of elec.

conductive metal minute pattern on substrate by using bilayered resists)

IT 9002-89-5, Polyvinyl alcohol

9004-65-3, Hydroxypropyl methyl cellulose

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(second resist component; lithog. formation of elec. conductive metal minute pattern on substrate by using bilayered resists)

L81 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:693390 HCAPLUS

DOCUMENT NUMBER: 135:247253

TITLE: Preparation of polyvinyl acetals as biomedical devices

INVENTOR(S): Goupil, Dennis W.; Chaouk, Hassan; Holland, Toy; Asfaw, Bruktawit T.; Goodrich, Stephen D.; Latini, Lucas

PATENT ASSIGNEE(S): Biocure, Inc., USA

SOURCE: PCT Int. Appl., 32 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001068722	A1	20010920	WO 2001-US8008	20010313
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2402774	A1	20010920	CA 2001-2402774	20010313
AU 2001043616	A	20010924	AU 2001-43616	20010313
US 20010051670	A1	20011213	US 2001-804925	20010313
US 6652883	B2	20031125		20010313
US 20010056301	A1	20011227	US 2001-805483	20010313
US 7070809	B2	20060704		20010313
EP 1263802	A1	20021211	EP 2001-916614	20010313
EP 1263802	B1	20051123		20010313
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,				

PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
JP 2003527173	T	20030916	JP 2001-567810
			20010313
AU 2001243616	B2	20051117	AU 2001-243616
			20010313
AT 310752	T	20051215	AT 2001-916614
			20010313
ES 2253360	T3	20060601	ES 2001-916614
			20010313
AT 327262	T	20060615	AT 2001-916599
			20010313
US 20030211073	A1	20031113	US 2003-465398
			20030619
US 20030223956	A1	20031204	US 2003-465497
			20030619
US 20050129656	A1	20050616	US 2005-34653
			20050113
PRIORITY APPLN. INFO.:		US 2000-188975P	P
			20000313
		US 2000-254697P	P
			20001211
		US 2001-804925	A3
			20010313
		US 2001-804963	A3
			20010313
		WO 2001-US8008	W
			20010313
		US 2003-465398	A1
			20030619

AB Hydrogel biomedical articles formed from macromers having a polymeric backbone comprise 1,2-diol and/or 1,3-diol units, such as polyvinyl alc., and pendant chains bearing crosslinkable groups and, optionally, other modifiers. Thus, Mowiol 4-88 was treated with acryamidoacetaldehyde di-Me acetate in HOAc solution to give crosslinked polymers.

IT 9002-89-5DP, Poly(vinyl alcohol), acetal derivs.

RL: DEV (Device component use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(crosslinked; preparation of polyvinyl acetals as biomedical devices)
RN 9002-89-5 HCAPLUS
CN Ethenol, homopolymer (CA INDEX NAME)

CM 1

CRN 557-75-5
CMF C2 H4 O

$\text{H}_2\text{C}=\text{CH}-\text{OH}$

IC ICM C08F008-00
ICS C08F008-30; A61L027-16; A61L027-52; A61L027-34; A61L029-04;
A61L029-08; A61L031-04; A61L031-10; C08F290-12
CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 9, 37
IT **Crosslinking agents**
(photochem.; preparation of polyvinyl acetals as
biomedical devices)
IT Coating materials
Crosslinking agents
Drug delivery systems
Hydrogels
Molecular weight distribution
Sensors
Viscosity
(preparation of polyvinyl acetals as biomedical
devices)
IT 9002-89-5DP, Poly(vinyl alcohol
, acetal derivs.
RL: DEV (Device component use); SPN (Synthetic preparation); THU
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
(Uses)
(crosslinked; preparation of polyvinyl acetals as biomedical devices)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN
THE RE FORMAT

L81 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:254902 HCAPLUS
DOCUMENT NUMBER: 134:281831
TITLE: Modified vinyl acetal polymers and modifiers for
curable polymers for electric insulating uses
INVENTOR(S): Tanaka, Toshiyuki; Onda, Atsushi; Katayama,
Hiroo
PATENT ASSIGNEE(S): Mitsubishi Chemical Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001098027	A	20010410	JP 2000-228827	200007

28

JP 3740962
US 6555617B2 20060201
B1 20030429

US 2000-628321

200007
28

US 20030130435

A1 20030710

US 2002-290515

200211
08US 6737474
PRIORITY APPLN. INFO.:

B2 20040518

JP 1999-214936

A

199907
29

JP 1999-214935

A

199907
29

JP 1999-216321

A

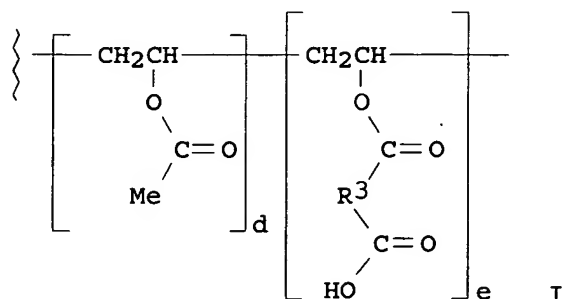
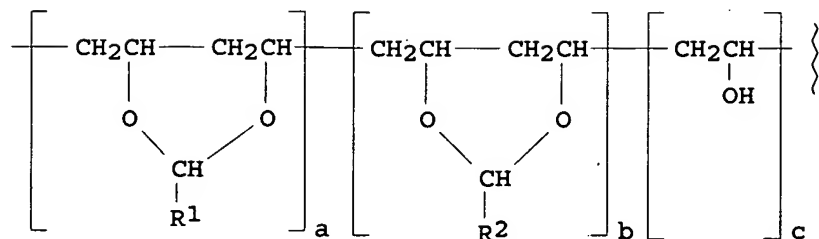
199907
30

US 2000-628321

A1

200007
28

GI



AB The vinyl acetal polymers mainly comprise structural repeating units I [R1 = (substituted) aryl, aralkyl- or aryl-substituted alkenyl; R2 = H, C1-10 alkyl; R3 = (substituted) C1-20 hydrocarbylene; a-e = content of each units (mol%); 0 < a ≤ 85; 0 ≤ b ≤ 80; 0 ≤ c ≤ 50; 0 ≤ d ≤ 30; 0 < e ≤ 50]. The curable polymers are useful for anisotropic

elec. conductive films and interlayer elec. insulating films. Thus, Gohsenol NL 05 (**polyvinyl alc.**) was reacted with PhCH₂CHO and butylaldehyde, then reacted with phthalic anhydride to give a modified polymer. Thus, a solution containing Epikote 828, the modified polymer, and a curing catalyst was applied on a polyimide film and heated to give a film showing dielec. constant 26 MHz, tan δ 24.5 x 10⁻³, and good adhesion to the polyimide film.

IT 9002-89-5DP, Gohsenol NL 05, reaction products with aldehydes and carboxylic anhydride
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (crosslinking agent; modified vinyl acetal polymers for curable polymers for elec. insulators and conductive films)

RN 9002-89-5 HCAPLUS
 CN Ethenol, homopolymer (CA INDEX NAME)

CM 1

CRN 557-75-5
 CMF C2 H4 O

H₂C=CH-OH

IC ICM C08F116-38
 ICS C08F008-14; C08F008-46; C08F008-48; C08L029-14; C08L101-00; H01B003-42

CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 37, 76

ST polyvinyl acetal modifier epoxy resin dielec film; epoxy resin crosslinking agent **polyvinyl acetal**; elec conductor anisotropic epoxy resin **polyvinyl acetal**; phenylacetoaldehyde butylaldehyde **polyvinyl alc** modifier epoxy resin

IT 66-77-3DP, 1-Naphthaldehyde, reaction products with **polyvinyl alc.** and succinic anhydride 85-44-9DP, Phthalic anhydride, reaction products with **polyvinyl acetals** 100-52-7DP, Benzaldehyde, reaction products with **polyvinyl alc.** and succinic anhydride, uses 104-53-0DP, Benzenepropanal, reaction products with **polyvinyl alc.** and succinic anhydride 108-30-5DP, Succinic anhydride, reaction products with **polyvinyl acetals** 122-78-1DP, Phenylacetaldehyde, reaction products with **polyvinyl alc.** and carboxylic anhydride 123-72-8DP, Butylaldehyde, reaction products with **polyvinyl alc.** and carboxylic anhydride 9002-89-5DP, Gohsenol NL 05, reaction products with aldehydes and carboxylic anhydride
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (crosslinking agent; modified vinyl acetal polymers for curable polymers for elec. insulators and conductive films)

L81 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2001:252997 HCAPLUS
 DOCUMENT NUMBER: 134:282203

TITLE: Curable resin compositions with good curability and film forming properties
 INVENTOR(S): Tanaka, Toshiyuki; Toda, Atsushi
 PATENT ASSIGNEE(S): Mitsubishi Chemical Corp., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 3
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 2001098165	A	20010410	JP 2000-228828	200007 28
US 6555617	B1	20030429	US 2000-628321	200007 28
US 20030130435	A1	20030710	US 2002-290515	200211 08
US 6737474	B2	20040518		
PRIORITY APPLN. INFO.:			JP 1999-214935	A 199907 29
			JP 1999-214936	A 199907 29
			JP 1999-216321	A 199907 30
			US 2000-628321	A1 200007 28

AB The compns. comprise (A) curable resins, (B) curing catalysts and (C) curing agents from modified polyvinyl acetal resins having (a) acetal units derived from aromatic aldehydes, aralkyl aldehydes or/and aryl-containing alkenyl aldehydes, 0-85, (b) acetal units derived from HCHO or/and C1-10 alkyl aldehydes, 0-80, (c) unmodified vinyl alc. units, 0-50, (d) vinyl acetate units 0-30, and (e) dicarboxylic acid vinyl ester units 0-50 mol%, provided that (a+b) ≠ 0. Thus, mixing Gohsenol NL-05 (a polyvinyl alc.) 100 with phenylacetaldehyde 195, butylaldehyde 33, PhMe 584 and 35% HCl 13.2, heating to 58° over 1.5 h and at 58° for 5 h, cooling to 35°, adding Na acetate 18.26 dissolved in MeOH 535.6 g and working up gave a vinyl acetal resin which was esterified with phthalic anhydride, combined at 1.8 g with Epikote 828 1.2, MEK 9.0 and 1-(2-cyanoethyl)-2-ethyl-4-methylimidazole 0.036 g, coated on a Upilex R (polyimide) film and heated at 180° for 2 h to give a coat film with good adhesion.

IT 9002-89-5DP, Gohsenol NL-05, mixed acetal derivs., esterified with dicarboxylic anhydride
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use);

POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(curable resin compns. with good curability and film forming properties)

RN 9002-89-5 HCAPLUS

CN Ethenol, homopolymer (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C2 H4 O

$\text{H}_2\text{C}=\text{CH}-\text{OH}$

IC ICM C08L101-00

ICS C08L029-14; C08L063-00; C09D004-02; C09D129-14; C09D163-00;
C09J004-02; C09J129-14; C09J163-00

CC 42-9 (Coatings, Inks, and Related Products)

IT 66-77-3DP, 1-Naphthaldehyde, mixed acetal derivs. with poly(vinyl alc.) and other aldehydes, esterified with dicarboxylic anhydride 85-44-9DP, Phthalic anhydride, esters with polyvinyl mixed acetals 100-52-7DP, Benzaldehyde, mixed acetal derivs. with poly(vinyl alc.) and other aldehydes, esterified with dicarboxylic anhydride, uses 104-53-0DP, Benzenepropanal, mixed acetal derivs. with poly(vinyl alc.) and other aldehydes, esterified with dicarboxylic anhydride 110-15-6DP, Succinic acid, esters with polyvinyl mixed acetals 110-16-7DP, Maleic acid, esters with polyvinyl mixed acetals 122-78-1DP, Phenylacetaldehyde, mixed acetal derivs. with poly(vinyl alc.) and other aldehydes, esterified with dicarboxylic anhydride 123-72-8DP, Butylaldehyde, mixed acetal derivs. with poly(vinyl alc.) and other aldehydes, esterified with dicarboxylic anhydride
RL: IMF (Industrial manufacture); MOA (Modifier or additive use);
POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(curable resin compns. containing dicarboxylic acid-esterified mixed polyvinyl acetals with good curability and film forming properties)

IT 9002-89-5DP, Gohsenol NL-05, mixed acetal derivs., esterified with dicarboxylic anhydride

RL: IMF (Industrial manufacture); MOA (Modifier or additive use);
POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(curable resin compns. with good curability and film forming properties)

L81 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:210734 HCAPLUS

DOCUMENT NUMBER: 126:200422

ORIGINAL REFERENCE NO.: 126:38737a,38740a

TITLE: Continuous manufacture of PVA-type sponge

INVENTOR(S): Uehara, Tsutomu; Kotani, Yoshiji; Sato, Takaya

PATENT ASSIGNEE(S): Nisshin Spinning, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09012763	A	19970114	JP 1995-189875	19950703
JP 3511274	B2	20040329	JP 1995-189875	19950703

PRIORITY APPLN. INFO.: JP 1995-189875

AB Title process comprises mixing PVA aqueous solns., pore-forming agents, crosslinking agents, and reactive catalysts, molding, heating for crosslinking, and washing for removal of the pore-foaming agents. Thus, a 10%-PVA solution 3000, PVA fiber 30, Sumitex M 3 90, Sumitex ACX 30, and Na2SO4.10H2O 6000 g were mixed, kneaded at 5°, molded at 98° for 30 min, and washed to give a sponge with good processability.

IC ICM C08J009-26
 ICS C08J009-26; C08L029-02

CC 38-2 (Plastics Fabrication and Uses)

ST PVA sponge pore forming agent; crystal sodium sulfate
 PVA sponge molding; polyvinyl acetal
 sponge crosslinking agent

IT Crosslinking catalysts
 Sponges (artificial)
 (continuous manufacture of PVA-type sponge using pore-foaming and crosslinking agents)

IT Polyvinyl acetals
 RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (continuous manufacture of PVA-type sponge using pore-foaming and crosslinking agents)

IT Aminoplasts
 RL: CAT (Catalyst use); USES (Uses)
 (crosslinking agents; continuous manufacture of PVA-type sponge using pore-foaming and crosslinking agents)

IT Polyvinyl acetals
 RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (formals; continuous manufacture of PVA-type sponge using pore-foaming and crosslinking agents)

IT 50-00-0, Formaldehyde, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (acetalization agents; continuous manufacture of PVA-type sponge using pore-foaming and crosslinking agents)

IT 9003-20-7DP, PVA, acetalized
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (continuous manufacture of PVA-type sponge using pore-foaming and crosslinking agents)

IT 9003-08-1, Sumitex M 3
RL: CAT (Catalyst use); USES (Uses)
(crosslinking agents; continuous manufacture of PVA-type
sponge using pore-foaming and crosslinking agents)

IT 58056-74-9, Sumitex ACX
RL: CAT (Catalyst use); USES (Uses)
(crosslinking catalysts; continuous manufacture of PVA-type
sponge using pore-foaming and crosslinking agents)

IT 7757-82-6, Sodium sulfate, uses
RL: MOA (Modifier or additive use); PEP (Physical, engineering or
chemical process); TEM (Technical or engineered material use); PROC
(Process); USES (Uses)
(pore-forming agents; continuous manufacture of PVA-type
sponge using pore-foaming and crosslinking agents)

L81 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1983:527300 HCAPLUS
DOCUMENT NUMBER: 99:127300
ORIGINAL REFERENCE NO.: 99:19531a,19534a
TITLE: Porous ceramics
PATENT ASSIGNEE(S): Kanebo, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 58064255	A	19830416	JP 1981-161702	198110 08
JP 63019476	B	19880422		
PRIORITY APPLN. INFO.:			JP 1981-161702	198110 08

AB Porous ceramics are made by mixing fine ceramic materials with polyvinyl alc.), reacting in the presence of a crosslinking agent to make ceramic-polyvinyl acetal type synthetic resin porous bodies, and firing in an oxidizing atmospheric Thus, poly(vinyl alc.) was mixed with water, heated to 60°, mixed with a starch dispersion, heated, mixed with formalin, H2SO4, and water, and the mixture was mixed with a ceramic powder containing SiO2 9, Mg(OH)2 21, Al(OH)3 5, kaolin 28, and grog 37 parts, molded, heated, washed, and fired at 1520° for 24 h to give a porous ceramic having porosity consisting of continuous pores 88%. It can be used for dust, mist, and oil separation and as filter.

IC C04B021-06
CC 57-2 (Ceramics)

L81 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1980:111927 HCAPLUS
DOCUMENT NUMBER: 92:111927
ORIGINAL REFERENCE NO.: 92:18271a,18274a
TITLE: Semipermeable membranes
INVENTOR(S): Kamiyoshi, Kazuhiko; Takeda, Noryuki; Maita,

PATENT ASSIGNEE(S): Hitoshi
 SOURCE: Sekisui Chemical Co. Ltd., Japan
 Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	-----	-----	
JP 54139887	A	19791030	JP 1978-48067	197804 21
			JP 1978-48067	A 197804 21

PRIORITY APPLN. INFO.:

AB Semipermeable membranes are prepared from crosslinked polyvinyl acetals. Thus, 0.5% aqueous poly(vinyl alc
 .) (d.p. 1500) acetal with Me₂NCH₂CHO is cast, dried at 50° for 24 h to an 8.9-μ membrane, and crosslinked with glyoxal [107-22-2] vapor for 30 min to give a semipermeable membrane with salt rejection (0.5% aqueous NaCl, 40 kg/cm²) 70.3% and water permeation 0.95 ton/m²-h.

IC B01D013-04

CC 37-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 61

ST polyvinyl acetal membrane semipermeable; glyoxal crosslinker polyvinyl acetal; crosslinking polyvinyl acetal membrane; desalination membrane semipermeable; dimethylaminoacetaldehyde polyvinyl acetal

IT 107-22-2
 RL: MOA (Modifier or additive use); USES (Uses)
 (crosslinking agents, for polyvinyl acetal semipermeable membranes)

IT 52334-92-6D, acetal with poly(vinyl alc
 .)
 RL: USES (Uses)
 (membranes, crosslinking of semipermeable)

=>

FILE 'HCAPLUS' ENTERED AT 15:32:32 ON 14 JUL 2008
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L78 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:97926 HCAPLUS
DOCUMENT NUMBER: 142:207649
TITLE: Ink-jet printing paper and its manufacture
INVENTOR(S): Kaneko, Manabu; Tsubaki, Yoshinori
PATENT ASSIGNEE(S): Konica Minolta Holdings, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 22 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2005028747	A	20050203	JP 2003-196377	200307 14
PRIORITY APPLN. INFO.: JP 2003-196377				200307 14

AB In the paper having porous layers containing ionizing radiation-crosslinkable hydrophilic polymers and inorg. fine particles on supports, the hydrophilic polymers are crosslinked with crosslinking agents. The paper is manufactured by applying solns. containing the hydrophilic polymers, the inorg. fine particles, and the crosslinking agents on the supports and drying. The paper may be manufactured by applying solns. containing the hydrophilic polymers and the inorg. fine particles on supports, applying the crosslinking agents on the resulting porous layers, and drying. The paper shows good ink absorbability, surface smoothness, crack resistance, and high gloss.

IT 107-22-2, Glyoxal
RL: RCT (Reactant); TEM (Technical or engineered material use);
RACT (Reactant or reagent); USES (Uses)
(crosslinking agents; manufacture of ink-jet printing paper having hydrophilic polymer porous layers with good ink absorbability)

RN 107-22-2 HCAPLUS
CN Ethanedial (CA INDEX NAME)

O=CH-CH=O

IC ICM B41M005-00
ICS B41J002-01

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT Polyvinyl acetals
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(crosslinked; manufacture of ink-jet printing paper having hydrophilic

polymer porous layers with good ink absorbability)
 IT 107-22-2, Glyoxal 822-06-0, Hexamethylene diisocyanate
 2224-15-9, Ethylene glycol diglycidyl ether 10043-35-3, Boric
 acid, reactions 15791-08-9 26750-50-5, Bisvinylsulfonylethyl
 ether
 RL: RCT (Reactant); TEM (Technical or engineered material use);
 RACT (Reactant or reagent); USES (Uses)
 (crosslinking agents; manufacture of ink-jet
 printing paper having hydrophilic polymer porous layers with good
 ink absorbability)

L78 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:587942 HCAPLUS

DOCUMENT NUMBER: 141:124156

TITLE: Crosslinking of poly(vinyl
acetals)

INVENTOR(S): Papenfuhs, Bernd; Steuer, Martin; Gutweiler,
Matthias

PATENT ASSIGNEE(S): Kuraray Specialities Europe GmbH, Germany

SOURCE: Ger. Offen., 12 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

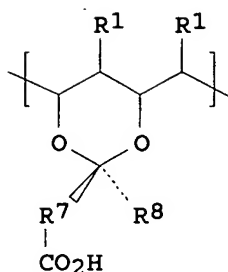
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10319201	A1	20040722	DE 2003-10319201	20030429
WO 2004063231	A1	20040729	WO 2003-EP14109	20031212
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003294838	A1	20040810	AU 2003-294838	20031212
BR 2003017977	A	20051206	BR 2003-17977	20031212
EP 1622946	A1	20060208	EP 2003-785800	20031212
CN 1759125	A	20060412	CN 2003-80110133	20031212
JP 2006513284	T	20060420	JP 2004-565965	20031212

US 20060052533	A1	20060309	US 2005-542019	200312 12
PRIORITY APPLN. INFO.:				200507 11
			DE 2003-10300321	IA 200301 09
			DE 2003-10319201	A 200304 29
			WO 2003-EP14109	W 200312 12

GI



AB The poly(vinyl acetals) are crosslinked by reacting a polymer containing structural units (1) CHOHCHR1 ($\text{R1} = \text{H, Me}$) and optionally structural units (2) CHO2CR2CHR1 ($\text{R2} = \text{H, C1-6 alkyl}$), (3) CR5R6CR3R4 ($\text{R3-R6} = \text{residues with mol. weight 1-500 g/mol}$) and acetal units I [$\text{R7} = \text{bond, C1-10 alkylene, (un)substituted C6-12 arylene; R8} = \text{H, CO2H, C1-10 alkyl, (un)substituted C6-12 aryl}$] with a polyaldehyde R9(CHO)n ($\text{R9} = \text{C1-40 residue; } n \geq 2$), e.g., pentanediol or nonanediol, and with esterification of structural units (1) with structural units I. The crosslinked poly(vinyl acetals) are useful for manufacture of plastic films, laminated safety glass, for coatings and as ion-conductive intermediate layers for electrochromic systems (no examples).

IT 111-30-8, Glutardialdehyde 51651-40-2,
1,9-Nonanediol

RL: RCT (Reactant); RACT (Reactant or reagent)
(crosslinking agent; crosslinking
of poly(vinyl acetals) with
polyaldehydes)

RN 111-30-8 HCAPLUS

CN Pentanediol (CA INDEX NAME)

$\text{OHC}-(\text{CH}_2)_3-\text{CHO}$

RN 51651-40-2 HCAPLUS
CN Nonanedial (CA INDEX NAME)

OHC- (CH₂)₇-CHO

IC ICM C08F008-28
ICS C08F008-14; C08F016-00
CC 35-8 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 38, 74, 76
ST **polyvinyl acetal** crosslinking polyaldehyde;
dialdehyde crosslinking agent **polyvinyl acetal**
IT Windshields
(automotive; crosslinking of **poly(vinyl acetals)** with polyaldehydes)
IT Coating materials
Crosslinking
Plastic films
(crosslinking of **poly(vinyl acetals)** with polyaldehydes)
IT **Polyvinyl acetals**
RL: RCT (Reactant); RACT (Reactant or reagent)
(crosslinking of **poly(vinyl acetals)** with polyaldehydes)
IT Safety glass
RL: TEM (Technical or engineered material use); USES (Uses)
(laminated safety glass; crosslinking of **poly(vinyl acetals)** with polyaldehydes)
IT Crosslinking agents
(polyaldehydes; crosslinking of **poly(vinyl acetals)** with)
IT Aldehydes, reactions.
RL: RCT (Reactant); RACT (Reactant or reagent)
(polyfunctional, crosslinking agents; crosslinking of **poly(vinyl acetals)** with)
IT Laminated glass
RL: TEM (Technical or engineered material use); USES (Uses)
(safety glass; crosslinking of **poly(vinyl acetals)** with polyaldehydes)
IT 111-30-8, Glutardialdehyde 51651-40-2,
1,9-Nonanedial
RL: RCT (Reactant); RACT (Reactant or reagent)
(crosslinking agent; crosslinking of **poly(vinyl acetals)** with polyaldehydes)

L78 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:587941 HCAPLUS
DOCUMENT NUMBER: 141:124155
TITLE: Crosslinking of **poly(vinyl acetals)**
INVENTOR(S): Papenfuhs, Bernd; Steuer, Martin; Gutweiler, Matthias
PATENT ASSIGNEE(S): Kuraray Specialities Europe GmbH, Germany
SOURCE: Ger. Offen., 9 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10319199	A1	20040722	DE 2003-10319199	20030429
WO 2004063232	A1	20040729	WO 2003-EP14110	20031212
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003293853	A1	20040810	AU 2003-293853	20031212
EP 1606325	A1	20051221	EP 2003-789238	20031212
EP 1606325	B1	20080305		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2006513285	T	20060420	JP 2004-565966	20031212
AT 388170	T	20080315	AT 2003-789238	20031212
US 20060205871	A1	20060914	US 2005-542022	20051230
PRIORITY APPLN. INFO.:				DE 2003-10300320 IA 20030109
				DE 2003-10319199 A 20030429
				WO 2003-EP14110 W 20031212

AB The poly(vinyl acetals) are crosslinked by reacting a polymer containing structural units (1) CHOHR1 (R1 = H, Me) and optionally structural units (2) CHO2CR2CHR1 (R2 = H, C1-6 alkyl), (3) CR5R6CR3R4 (R3-R6 = residues with mol. weight 1-500 g/mol) and (4) CHR7CR8CO2H [R7, R8 = H,

carboxyl, C1-10 (carboxy-substituted) alkyl, (un)substituted C6-12 aryl] with a polyaldehyde $R_9(CHO)_n$ (R_9 = C1-40 residue; $n \geq 2$), e.g., pentanedral or nonanedral, and with esterification of structural units (1) with structural units (4). The crosslinked poly(vinyl acetals) are useful for manufacture of plastic films, laminated safety glass, for coatings and as ion-conductive intermediate layers for electrochromic systems (no examples).

IT 111-30-8, Glutardialdehyde 51651-40-2,
1,9-Nonanedral
RL: RCT (Reactant); RACT (Reactant or reagent)
(crosslinking agent; crosslinking
of poly(vinyl acetals) with
polyaldehydes)
RN 111-30-8 HCAPLUS
CN Pentanedral (CA INDEX NAME)

OHC- $(CH_2)_3$ -CHO

RN 51651-40-2 HCAPLUS
CN Nonanedral (CA INDEX NAME)

OHC- $(CH_2)_7$ -CHO

IC ICM C08F008-28
ICS C08F008-14; C08F016-00
CC 35-8 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 38, 74, 76
ST polyvinyl acetal crosslinking polyaldehyde;
dialdehyde crosslinking agent polyvinyl acetal
IT Windshields
(automotive; crosslinking of poly(vinyl
acetals) with polyaldehydes)
IT Polyvinyl acetals
RL: TEM (Technical or engineered material use); USES (Uses)
(crosslinked; crosslinking of poly(vinyl
acetals) with polyaldehydes)
IT Coating materials
Crosslinking
Plastic films
(crosslinking of poly(vinyl acetals
) with polyaldehydes)
IT Safety glass
RL: TEM (Technical or engineered material use); USES (Uses)
(laminated safety glass; crosslinking of poly(
vinyl acetals) with polyaldehydes)
IT Crosslinking agents
(polyaldehydes; crosslinking of poly(vinyl
acetals) with)
IT Aldehydes, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(polyfunctional, crosslinking agents; crosslinking of
poly(vinyl acetals) with)
IT Laminated glass
RL: TEM (Technical or engineered material use); USES (Uses)
(safety glass; crosslinking of poly(vinyl

acetals) with polyaldehydes)
IT 111-30-8, Glutardialdehyde 51651-40-2,
1,9-Nonanedial
RL: RCT (Reactant); RACT (Reactant or reagent)
(crosslinking agent; crosslinking
of poly(vinyl acetals) with
polyaldehydes)

L78 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:574566 HCAPLUS
DOCUMENT NUMBER: 142:280991
TITLE: Study of the preparation of PVA composite
nanofiltration membrane
AUTHOR(S): Bian, Xiaokai; Shi, Liuqing; Liang, Guoming; Lu,
Xiaofeng
CORPORATE SOURCE: Shanghai Institute of Nuclear Research, Chinese
Academy of Science, Shanghai, 201800, Peop. Rep.
China
SOURCE: Mo Kexue Yu Jishu (2004), 24(2), 12-14, 22
CODEN: MKYJEF; ISSN: 0254-6140
PUBLISHER: Mo Kexue Yu Jishu Bianjibu
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

AB The composite nanofiltration is prepared by coating hydrophilic
polyvinyl alc. (PVA) on the base membrane. The effects of the
properties of base membrane, the concentration of PVA and crosslinking
solution, and the thickness of the surface layer, etc. on the membrane
performance are investigated. The results showed that PVA composite
membrane could be formed by coating 5% PVA solution and 1%
glutaraldehyde solution on the base membrane with cut-off mol. weight
100,000.

IT 111-30-8, Glutaraldehyde
RL: RCT (Reactant); RACT (Reactant or reagent)
(crosslinking agent; preparation of polyvinyl
alc.-coated nanofiltration membrane)

RN 111-30-8 HCAPLUS
CN Pentanedial (CA INDEX NAME)

OHC-(CH₂)₃-CHO

CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 37

IT Polyvinyl acetals
RL: PRP (Properties); TEM (Technical or engineered material use);
USES (Uses)
(glutarals; preparation of polyvinyl alc.-coated nanofiltration
membrane)

IT 111-30-8, Glutaraldehyde
RL: RCT (Reactant); RACT (Reactant or reagent)
(crosslinking agent; preparation of polyvinyl
alc.-coated nanofiltration membrane)

L78 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:551864 HCAPLUS
DOCUMENT NUMBER: 135:123355
TITLE: Odorless and nontoxic cyclic acetal derivatives
for crosslinking agents
INVENTOR(S): Ando, Yoshinori

PATENT ASSIGNEE(S): Kuraray Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2001206882	A	20010731	JP 2000-17322	

200001
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PRIORITY APPLN. INFO.: JP 2000-17322

200001
26

OTHER SOURCE(S): MARPAT 135:123355
AB Cyclic acetals were prepared from aliphatic dialdehydes and triols in the presence of acids. Thus, a compatible crosslinking agent for ethylene-vinyl alc. copolymer was prepared from 1,9-nonanedial and glycerin.
IT 45037-67-0, 1,10-Decanedial 51651-40-2, 1,9-Nonanedial
RL: RCT (Reactant); RACT (Reactant or reagent)
(odorless and nontoxic cyclic acetal derivs. for crosslinking agents)
RN 45037-67-0 HCAPLUS
CN Decanedial (CA INDEX NAME)

OHC-(CH₂)₈-CHO

RN 51651-40-2 HCAPLUS
CN Nonanedial (CA INDEX NAME)

OHC-(CH₂)₇-CHO

IC ICM C07D317-20
ICS C07D319-06; C07D321-06; C07D407-06
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 28
IT Polyvinyl acetals
RL: IMF (Industrial manufacture); PREP (Preparation)
(odorless and nontoxic cyclic acetal derivs. for crosslinking agents)
IT 56-81-5, Glycerin, reactions 4704-94-3, 2-Hydroxymethyl-1,3-propanediol 30157-60-9, 2-Methyl-1,8-octanedial 45037-67-0, 1,10-Decanedial 51651-40-2, 1,9-Nonanedial
RL: RCT (Reactant); RACT (Reactant or reagent)
(odorless and nontoxic cyclic acetal derivs. for crosslinking agents)

L78 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:210644 HCAPLUS
DOCUMENT NUMBER: 128:271776

ORIGINAL REFERENCE NO.: 128:53777a,53780a
 TITLE: Coated plastic moldings with allergy prevention
 INVENTOR(S): Seki, Michiko; Abe, Osamu; Nishiyama, Shigeru
 PATENT ASSIGNEE(S): Nikon Corp., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10087862	A	19980407	JP 1996-245198	199609 17
PRIORITY APPLN. INFO.:			JP 1996-245198	199609 17

AB Title moldings (e.g., eyeglass frames or hearing aids) have polyvinyl acetal-based human skin-contacting portions. A PMMA plate was soaked in a solution containing S-Lec BM 5, MeSi(OMe)₃, glutaraldehyde, and p-toluenesulfonic acid and heated at 90° for 30 min to form a plate showing good allergy prevention after contacting with human skin over 48 h.

IT 111-30-8, Glutaraldehyde
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (crosslinker for polyvinyl butyral coatings; plastic moldings coated with polyvinyl acetal-based coatings for allergy prevention)

RN 111-30-8 HCAPLUS

CN Pentanedial (CA INDEX NAME)

OHC-(CH₂)₃-CHO

IC ICM C08J007-04

CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 38, 63

IT Polyvinyl butyrals

RL: TEM (Technical or engineered material use); USES (Uses)
 (S-Lec BM 5; plastic moldings coated with polyvinyl acetal-based coatings for allergy prevention)

IT Eyeglasses

(frames; plastic moldings coated with polyvinyl acetal-based coatings for allergy prevention)

IT Acrylic polymers, miscellaneous

Molded plastics, miscellaneous

RL: MSC (Miscellaneous)

(moldings; plastic moldings coated with polyvinyl acetal-based coatings for allergy prevention)

IT Allergy

(prevention; plastic moldings coated with polyvinyl acetal-based coatings for allergy prevention)

IT 111-30-8, Glutaraldehyde 1185-55-3, Methyltrimethoxysilane

RL: RCT (Reactant); RACT (Reactant or reagent)

(crosslinker for polyvinyl butyral coatings; plastic

moldings coated with **polyvinyl acetal**-based
coatings for allergy prevention)
IT 9011-14-7, PMMA
RL: MSC (Miscellaneous)
(moldings; plastic moldings coated with **polyvinyl**
acetal-based coatings for allergy prevention)

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